



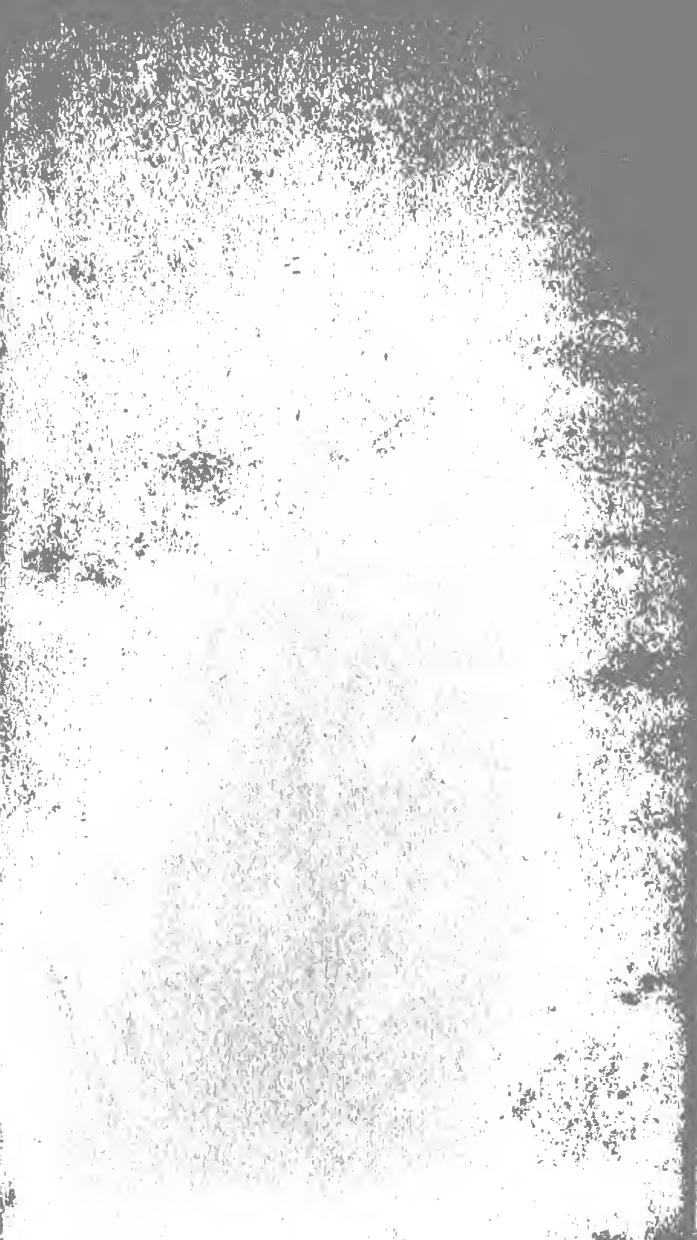
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MT. C. *from*
A PRACTICAL TREATISE
ON THE SUPERIOR EFFICACY AND SAFETY OF
STIZOLOBIUM OR COWHAGE,

(THE DOLICHOS PRURIENS OF LINNÆUS,)

INTERNALLY ADMINISTERED IN *The Author*
DISEASES OCCASIONED BY

WORMS;

*Wherein are exhibited, a concise statement of the Symptoms
of the Disease, and the Uncertainty of most other
Vermifuges now in Use.*

TO WHICH ARE ADDED

Observations on some other indigenous Anthelmintics of the West
Indies; and several CASES, not published in
any of the former Editions.

By WILLIAM CHAMBERLAINE,

MEMBER OF THE ROYAL COLLEGE OF SURGEONS, LONDON;
FELLOW OF THE LONDON MEDICAL SOCIETY;
HONORARY MEMBER OF THE PHYSICAL SOCIETY OF GUY'S;
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SOCIETY OF THE ISLAND OF JAMAICA, &c. &c.

THE NINTH EDITION, ENLARGED.

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P R E F A C E

TO THE FIRST EDITION.

THE universality of complaints arising from Worms, so destructive to the human body, must make every attempt to render those maladies less frequent and fatal, a matter of importance to the public. The following sheets were therefore written, not only for the perusal of medical practitioners, but the information and benefit of the community.

The inefficacy of European medicines, even those esteemed the most powerful of vermifuges, induced me to offer this Treatise to the public; for, although some detached pieces relative to the exhibition of COWHAGE, have at different times appeared in print, (of which I have taken notice in the subsequent part of this work,) I do not recollect that any thing has been written professedly and practically on that subject. It is therefore presumed, the present publication may not be deemed unne-

cessary, being intended for the introduction of this useful anthelmintic into more general use, and practically to identify two circumstances of the utmost importance, namely, its SAFETY, and EFFICACY.

It is not, however, my design, in the following pages, to enter into a minute investigation of the nature and causes of worms in the human body, or to take up much of the reader's time in describing their symptoms; those have already been sufficiently enumerated and pointed out by preceding writers.

My principal view is to recommend a medicine, hitherto little known in Europe, but which, from its safety, and powerful effects when internally administered, and brought to the test of experience, will be found justly deserving a principal place in the *Materia Medica*.

London, June 10, 1784.

PREFACE

PREFACE

TO THE PRESENT EDITION.

THE favourable reception with which the public has been pleased to honour this little Treatise, having induced me to prepare a new edition, I have been desirous of rendering it more generally useful, by making some considerable additions, and correcting a few inaccuracies.

My primary object continues to be, the introduction into common practice, of an article of the *Materia Medica*, which I have long experienced to be a safe and efficacious ANTHELMINTIC; but I trust I shall not be charged with needless amplification in now prefixing a more extended description of the WORMS that infest the human body, the characteristic marks whereby the several species are distinguished, and the variety of troublesome, often alarming symptoms of disease which their presence occasions in the animal frame.

The subject is equally important to the naturalist and physician; and these two characters are so often united in the medical practitioner, that I should hope, most of my readers to whom the practical part of this Treatise may prove interesting, will not be indifferent to the descriptive.

W. C.

London, Nov. 28th. 1804.

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PRACTICAL TREATISE

ON THE

EFFICACY OF COWHAGE.

 CHAP. I.

GENERAL DESCRIPTION OF INTESTINAL WORMS.

ANIMATION is so bountifully bestowed through all parts of the universe, that there is scarcely any living creature that does not afford habitation and nutriment, within itself, to some other living creature.

Birds, beasts, fishes, reptiles, all have their parasites; each, certain genera, proper to itself, infesting the intestinal tube, or other parts.

Man is not exempt from this law of the creation. Living, or dead, he is the prey of Worms.

B

Naturalists

Naturalists have described a great variety of Worms, which have been found in different parts of the human body* ; but, in this place, a general description of those which are most commonly known, and which infest only the alimentary canal, is all that is deemed necessary.

These are,

1. The *Ascaris Lumbricoides*.
2. *Tænia*.
3. *Ascaris vermicularis*.
4. *Trichuris*.

Ascaris lumbricoides. This, which is also called the *Teres*, or *long and round Worm*, has been considered as a variety of the *Lumbricus terrestris*, (being mentioned by Linnæus under the name of

* *Præter vermes intestinales, sunt et alii, OMNES FERE CORPORIS PARTES incolentes, uti vermes dentales, gingivales, rhinarii, pulmonarii, cardiaci, sanguinarii, urinarii, umbilicales; vermes in Hepate, in saliva, &c. Sed hi omnes non nisi in statu morbido inveniuntur.*

SENNERTUS.

See also, Baglivi ; Andry ; Van Doeveren ; Le Clerc ; Professor Pallas ; Bloch, of Berlin ; Dr. Simmons ; Dr. Hooper, &c.

L. Intestinalis,

L. Intestinalis, and by Ray called *Lumbricus Intestinorum teres*;) from which, however, it evidently differs in its conformation, being entirely without the elevated ring or band, so conspicuous in the middle of the common Earth Worm*.

This Worm is from two to fifteen inches in length; and in circumference, when full grown, equal to that of a goose-quill. When recently excluded they are nearly transparent; and of a pale reddish colour; but soon after they die, that colour is changed to a light opaque yellow.

In general, these Worms are very numerous. Dr. Hooper, of the Mary-le-bone Infirmary, says, he knew a girl eight years old who voided, per anum, upwards of two hundred in the course of a week; and I myself have very frequently seen in Jamaica, where, as in all the other West India Islands, this species of Worm is more common, both among the whites and the negroes, than in

* Memoirs of the Medical Society of London, Vol. II. p. 63.

England, as many *Teretes* discharged at one stool, after the exhibition of a vermifuge purge, as would nearly fill a pint measure.

The *Teres* is found in the small intestines, particularly the jejunum, and sometimes in the stomach. The stomach, however, does not appear to be their natural place of residence; but being irritated, they are liable to be dislodged from thence, and not unfrequently thrown up by vomit. When these Worms, as sometimes it happens, make their way into the cavity of the abdomen, the case is mortal.

The *Tænia*, or *Tape Worm*, is called by Tyson, De Haen, and others, *Lumbricus Latus*; and by the French, *Le Ver solitaire*, because it has been supposed, though erroneously, there never exists more than one at a time in the intestinal canal*.

* Doctor Nitret in his letter to De Haen, Act. Med. xii. 219, mentions a woman who was so hungry that she was obliged to eat day and night. The reason was, that she had EIGHTEEN *Tape Worms*, which were afterwards expelled.

This animal consists of a head placed at the smallest extremity, and a chain of articulations more or less broad or long, which gradually enlarge as they advance, and at length terminate in a tail formed by a rounded joint. Each of these joints contain their proper viscera. Doctor Hooper* describes two species of *Tania*; viz. 1. *T. Osculis marginalibus*, or, with little apertures, or mouths, on the margin or edge of each joint, very evident to the naked eye. "The osculum is only found on one edge of a joint, and none on the opposite margin of the same joint. It sometimes happens that a joint is furnished with more than one osculum; and, in general, the next joint has its osculum situated on the margin of the opposite side; so that it alternately changes. This order, however, is seldom preserved throughout the whole tract of the Worm, for they are sometimes on the same side for several joints together; but they never are situated on the *flattened* surface; hence, their being marginal is an essential character of this species."

† Memoirs of the Medical Society, Vol. V. Art. XXVII.

"Sp. 2. *T. osculis superficialibus*. Eng. The BROAD Tape Worm. The joints of this Tape-Worm are considerably more broad than long, and their oscula, or apertures, are not placed on the margin, but in the middle of the flattened surface, and only on one side; this species seldom parts with any joints. It is very seldom met with in this country, but is endemic in Switzerland and Russia, and very common in Germany and other parts of Europe*."

"The joints of the *Tania osculis marginalibus* are very easily separated from each other, whilst the animal is alive. Each joint, thus detached from the mother Worm, has the power of retaining, for a considerable time, its living principle; and is called, from its resemblance to the seed of the gourd, *Vermis Cucurbitinus*," (the GOURD WORM.)

The separated joints do not appear capable of re-

* Dr. Bloch, in his inaugural Dissertation, for which he received the prize of the Royal Society of Sciences at Copenhagen, describes a Worm, under the name of Ligula, which resembles a ribbon, and is without articulations.

taining

taining their situation for any length of time, but are soon forced down the intestinal tube, and at length creep out, or are expelled per anum. Dr. Hooper "knew a man, who, whenever he took an eccoprotic medicine, voided upwards of forty detached joints of *Tænia*, with his fæces; and remembers a female patient who was always tormented by their creeping per anum, two or three hours after dining, without the exhibition of any medicine."

A case is related in the latter part of this work, of a sailor, recommended to me by Dr. Thornton; and about the same time another occurred to me, of a bedstead maker, both of whom discharged daily incredible quantities of *Tænia*, in single joints or divided portions, and were rendered incapable, through extreme debility, of following their respective occupations. Both these were perfectly restored to health by the liberal exhibition of Cowhage.—The formation of fresh joints is so rapid, that I have known several persons who have evacuated from twenty to fifty in a day. Indeed, there

are very few of those who are troubled with *Tænia*, who do not pass off more or less every day.

It will be unnecessary to follow the ingenious Dr. Hooper, in his accurate anatomical description of every part of this animal; after all that has already been said, it may be sufficient to observe, that the head is extremely minute, not exceeding in size a grain of mustard seed, and that the joints nearest the head are not more than one eighth of an inch in breadth, and one sixteenth of an inch in length; they continue of this small size for about the first twenty or thirty joints, then gradually increase in length and breadth, until they arrive at their full size, which is from half to three quarters of an inch in length, and from one third to half an inch in breadth. The length of the Worm depends on the number of joints it may consist of; Boerhaave mentions his having seen a Tape Worm thirty ells in length; and I have myself measured them, from sixteen to twenty-five feet in length. Indeed, the exact admeasurement of a Tape Worm can never be very well ascertained; they have the power of contracting and dilating

dilating their bodies or joints; and a Tape Worm is always the longest when first discharged. A Mr. Jackson sent to me, in order to shew me a Tape Worm he had recently voided, in consequence of taking large and repeated doses of Cowhage; after having for six weeks before, been daily discharging detached joints, in number from ten to twenty each day. I measured it, when apparently dead, and found it seventeen feet in length: but Mr. Jackson assured me, that he had accurately measured it two hours before, and found it *twenty-one feet and a half*. I have said, *apparently* dead, because on putting it into a basin containing some rectified spirit of wine, its motions were very strong, and it continued to shew evident signs of distress for above three minutes after immersion, and, when quite dead, was contracted to at least half its original length.

How great a portion soever of the Tænia may be discharged, one thing it is necessary to impress upon the mind of the reader, namely, that unless the HEAD be also brought away, the Worm very soon is regenerated, and the patient suffers all the

B 5

same.

same inconveniencies as formerly ; I am convinced also, their generation is very rapid.

The same gentleman whom I just now mentioned, in a very few weeks after he had experienced a temporary suspension of all his complaints, by the discharge of so large a portion as has been stated, was again obliged to have recourse to the Cowhage, in increased quantity, in consequence of his having again began to discharge daily, single joints, and sometimes lengths of three, four and six joints ; and at last a Tape Worm, which he had no opportunity of measuring ; but which, in the aggregate of its bulk, he said, would have completely filled a half pint basin. This was in November 1800 ; and as he has remained perfectly free from complaint ever since, it is probable the latter *Tænia* may have been discharged entire ; that is to say, head and all.

The seat of the *Tape Worm* is, most commonly, the small intestines, the jejunum and ileum, of which it occupies so large a portion, as sometimes

to give a sensation of a large ball or weight, falling from one side to the other, as the patient turns in bed. But it is sometimes found in the stomach. *Van Doeveren* mentions, that a Dutch peasant, after having taken an emetic, vomited up *forty ells* of *Tape Worm*, and would have got clear of more, if he had not been afraid of puking out all his guts, and for that reason bit the Worm off*.

There are various opinions relative to the uses of the oscula, or little apertures or mouths, on the edge or margin of each joint.

Dr. Hooper says, the oscula are believed to be viscera subservient to the propagation of the species; and that they can be proved to give exit to the ovula. This opinion is supported by the ingenious Mr. Carlyle†.

By some, (*Coulet* and *Ernst*,) they are supposed.

* *Van Doeveren. Diss. de Verm. Intestinali.*

† *Transactions of the Linnæan Society, Vol. II. page 255.*

ed to be the mouths by which they take in their food, and at the same time consider them as excretory vessels. *Bonnett*, in his *Traité d'Insectologie*, appears to favour a similar opinion, and that they also act as organs of respiration.

When we consider the extreme minuteness of the head of this animal, and the minute and delicate structure of the joints more immediately connected with the head, I never can reconcile it to my mind that so small an organ can take in a sufficient quantity of aliment for the sustenance of a body of so much greater proportion; or, more properly speaking, a CHAIN of bodies, sometimes to the amount of several ells in length; and when, added to this, we take into the account the very great difficulty there is in disengaging the Tape Worm from its hold, and the obstinacy with which it eludes the action of even the most powerful medicines, is it not more probable, that these oscula not only answer the purpose of mouths, through which the Worm receives its aliment, but also of suckers or tenacula,

cula*, by which it is enabled to maintain its hold of the villous coat of the intestines, throughout its whole length?

The *Ascaris Vermicularis*, or *Maw Worm*, is, in colour, white, or of a pale yellow; when full grown it is about half an inch in length, and in thickness nearly equal to a fine cambric thread, whence it is called by some, the *Thread Worm*.

The seat of the *Ascarides* is the rectum; but they have been found in other parts. They are, in general, very numerous, occasioning a very great itching and irritation about the verge of the anus; extremely active and quick in their motions, and not unfrequently are found creeping from the anus, externally; hence the Germans have given them the name, "*Afterwurm*."

* *Rosenstein* is of the same opinion. "The Tape Worm is the most difficult to expel entirely, partly on account of its length, and the many turnings, or coils of the bowels; partly on account of the power this Worm is endowed with, of keeping himself fast to the intestines with the point of his smaller end (*meaning the head*) and with his suckers between each articulation.

Rosenstein on the Diseases of Children, and their Remedies, Ch. 22.

of

Of all the species of Worms which infest the human intestines, these are most common ; I am of opinion there are very few children without them. Where the constitution is delicate, and favourable to their production, the quantity of them capable of being nourished in the intestines, is incredible to any but those who are conversant with seeing them. I have known instances where the stools have appeared to be nothing else than myriads of ascarides, “ *all alive and leaping ;*” but Mr. Werner, surgeon to the British Factory at Algiers, says, that the Ascarides and the symptoms caused by them among the inhabitants of Great Britain, are nothing in comparison to what he has seen among the Algerines, with whom, by reason of their manner of living, they are much stronger, and occasion, frequently, death itself.

In addition to these already described, we are to notice a Thread Worm of a different species from the former, which, being not so often met with, has escaped the attention of most authors. This is called the *Trichuris*, or *long Thread Worm* ; and by the French, *le Ver a Queue*, or *Tailed Worm* ;
this

this differs from the *Ascaris*, in having a large and small extremity, whereas the *Ascaris* is pointed at both extremities. It's length is in general from one to two inches; the body, or obtuse end, is almost one sixteenth part of an inch in thickness; the tail is two thirds of the whole length of the Worm, as fine as a hair, and terminating in a very fine point. Dr. Hooper has given the best description of this Worm, in the Medical Journal, Vol. V. page 252, but no written description can convey so good an idea, as can be obtained by inspection of those inimitable plates, which accompany the ingenious and elaborate account of Worms, given by that gentleman in the volume alluded to.

The *Gordius*, or *Guinea Worm*, (*Vena Medinensis*,) found in the legs, and sometimes other parts of Negroes imported from Africa to the West Indies, and not unfrequently, of white people also, who have been a long time on the coast of Guinea, being unconnected with the present subject, I forbear to notice it farther than merely to make mention of it.

CHAP. II.

CAUSES.

THE causes which may be favourable to the propagation of Worms are various; but how they are at first introduced into the stomach or intestines, or at what period, remains a matter of doubt and uncertainty; some will have it, that they even exist in the intestines of the infant before birth*; be that as it may, I have certainly seen both the round worm, and ascarides, in children in the month; and this, and many other facts that have come to my knowledge, roundly contradict the assertion of some, which I most pointedly maintain to be erroneous, “that children never have worms while they live on the breast.”

* *Van Doeveren*, *Diff. de Verm. intest. Baglivi*, *Epist. ad Andry. Hippocrates* (*περι νεων*, L. IV. p. 511) affirmat *Lumbricos latos et rotundos exivisse cum primo stercore*. *Bloch* endeavours to prove that Worms are destined by nature to be generated, and to live in the bodies of other animals: Among other arguments in favour of this opinion, he observes that they are found in the fœtuses of different animals in utero; that they resist the digestive power of the stomach, and that they constantly die when expelled from or taken out of the body. *Bloch*, *Abhandlung von der erzeugung der eingeweidewurmer*, &c. Sect. 2.

Our food is full of Worms, and their ova; it is supposed by many, that all fluids, even the blood itself, abound with their principia; some will have it, that it is from these Worms, or ova, taken in with our food, intestinal Worms are produced; but how does this account for Worms being found in the intestines of such very young children, and even foetuses? Besides, the heat of the stomach, and the gastric fluid, would soon destroy any Worms taken into the stomach, which were not proper to the animal body; add to this, that Worms which are found in the intestines of animals, whether of mankind, or of beasts, birds, or fishes, are unlike any that are found among vegetables, in earth, or in water*.

It is not, however, of so much importance in this place, to ascertain the origin of intestinal Worms, as to examine what circumstances are most favourable to their continuance in number, bulk, and strength.

* Difficillimum quidem est explicatu, quam ratione Vermes in animantibus viventibus generantur.

Swammerdam, Hist. Insect.

Debility of the organs of digestion, in an especial manner, promotes the generation of Worms: and a relaxed and weak stomach affords them a nidus, where they multiply and are nourished. Hence, children are more frequently infested by worms, than adults, because of their greater moisture; and those children more than others who are of a relaxed fibre, and in whose chylo-poeitic viscera digestion is ill performed.

Bad living, (as it is called,) that is, a long continuance of unwholesome diet, or even of that which is wholesome, if not in sufficient quantity, will dispose a constitution to Worms, which was not before subject to them. Kidd Wake, who suffered five years imprisonment in Gloucester jail, during the three first years of which term, he subsisted upon bread and water, excepting only six ounces of meat twice a week, never knew he had any Worms, but was always strong and healthy, before his confinement; but after the two first years of his incarceration he began to pass the *Tania Cucurbitina* in large quantities every day; and

and from that to the time of his liberation, he suffered so much from the Tænia, that when he came out of prison, he was literally a mere skeleton. For a long time after his release, the quantities of Tænia which he expelled, both in single joints, and in lengths of from three to six and ten inches, as well when he took the Cowhage, as when he did not, were incredible. His constitution was so broken down, that any drastic medicines, or such as are usually given for the expulsion of the Tænia, would most probably have destroyed him; the Cowhage, given in double and treble quantity, and aided by limatur. flanni, liberally exhibited, has, at times, given him considerable relief, but, he has never, even to this day, been completely cured.

Among the circumstances most likely to subject the constitution to Worms, the eating of great quantities of crude, watery vegetables*, without a due

* See Mr. Werner's communication of cases occurring among the inhabitants of Algiers, in the Appendix to this Work.

admixture of animal food ; as also, too great an indulgence in green and unripe fruit, may be considered in a prominent point of view.

Hence, in the West Indies it happens, that among the negroes, whose diet consists chiefly of vegetables*, complaints arising from Worms are much more frequent than among white people, infomuch that it is very rare to see a negro child without a swoln belly, and other symptoms of this disease.

* Plantanes, yams, cocos, cassada, rice, Angola pease, and the maize, or Indian corn, constitute the principal part of the diet of negro slaves. The latter, of which they are remarkably fond when just beginning to ripen, (in which state it is usually termed *mutton*) is favourable to the multiplication of Worms, more than any thing I know of. Very little animal food comes to the share of a negro slave ; and of this, only such as is of the most indigestible kind ; as salt herrings, Newfoundland salt fish, cured beef, salt pork, and the like.

CHAP. III.

SYMPTOMS.

THERE is no appearance which this complaint, in some constitutions, will not assume*; Doctor Dwaris, an old, and very eminent Physician, of Kingston, (Jamaica,) used frequently to declare, that whenever he saw any uncommon and violent symptoms, not immediately to be accounted for, and which superstitious or ignorant people would be apt to attribute to witchcraft, he would, without hesitation, exhibit anthelmintics, and that in ninety-nine

* *Prohè notandum est, quod nullum tam peregrinum sit symptoma, tamque Δαιμονιακον, quod vermes excitare non possint. Horrenda quidem Symptomata quandoque à vermibus exoriantur, ut non raro ex incantatione produci vulgo credantur. Baglivi.*

See also, Werner in Memoirs of the Medical Society of London, Vol. III. Appendix, page 591.

cases out of an hundred, he found himself right in his conjectures.

In general, it is not difficult to know when a patient is troubled with Worms. A hard swelled belly, disagreeable breath—a particular heaviness, or languid, livid look, about the eyes; a swelling and paleness of the lips—and especially the upper lip—an enlargement of the nostrils; itching of the nose, and sometimes a particular whiteness of it; pale, thin, crude urine, and in some instances, the urine perfectly white; a troublesome itching about the anus, (especially from *Ascarides*,) flow fever, with a pulse sometimes hard, sometimes weak and quick, but always unequal; obstinate costiveness, or else diarrhoea; appetite irregular; sometimes loathing all manner of food, at other times uncommonly voracious, are almost always concomitant and unerring symptoms of this disease.

Besides these, the face will be sometimes pale, at other times *crimsoned* over with an universal flushing.

To

To these symptoms succeed mucous stools*, tenesmus; sudden griping pains in the stomach and intestines; a short, dry cough; vomiting, startings during the time of sleep, and grinding the teeth; prolapsus ani†; ophthalmia‡; great thirst; frequent pains in the side; sudden loss of senses, with

* From the irritation of the intestines, their peristaltic motion will be increased, and the secretion of the mucus will consequently be in larger quantity.

† Underwood.

‡ *Ophthalmia*. I was ignorant that Worms could be the occasion of Ophthalmia, until, in 1787, Mr. Wathen placed a young lady under my care, who came up from Cambridgeshire for his advice, on account of a very obstinate Ophthalmia, which had baffled every endeavour of the most eminent medical gentlemen to conquer it. The irritability was so great, that she could not bear the smallest ray of light, coming even through a pin-hole in the window shutter. At first I supposed there must have been some mistake, as I could not conceive a reason why Mr. Wathen should send a patient from himself to me to be cured of Ophthalmia, until it was explained to me that that gentleman suspected the cause of the young lady's malady to be Worms, and that, after having ineffectually tried other means to remove it, he wished her to make trial of the Cowhage, which in a short time was attended with very happy consequences.

Mr. Ware also notices the frequency of Ophthalmia arising from the same cause.

“ In consequence of the close sympathy between the eyes and the bowels, when the latter are loaded with slimy fæces, they not only
“ proved

with stupidity, and a listlessness and want of inclination to stir or take exercise*; in not a few instances, loss of speech†. When the disease is farther advanced, the mucous stools increase—cold sweats come on—convulsions, epileptic fits, palpitation of the heart, frequent faintings,—
hectic

“ prove a nidus for Worms of various sorts, but occasion, not unfrequently, among other symptoms, an inflammation of the eyes. From this circumstance, the Ophthalmy in children is sometimes incurable, until active remedies are administered, thoroughly to cleanse the primæ viæ. But it should be remembered, that the object in administering such remedies is to evacuate the morbid contents of the stomach and bowels, and not to debilitate the general system. WARE, *on Ophthalmy, Pforophthalmy, and Purulent Eye*, note 7, page 45.

* It is astonishing how firmly worms adhere to the coats of the stomach, or intestines, much like leeches; from whence they draw their nourishment by continual suction, which in the large Worms, when in great quantity, must prove a considerable loss to the human body, by defeating the nutrition of the body, causing great waste, languor, fevers, and many other bad consequences; often occasioning violent cutting, piercing pains, and consumption of flesh.

ROWLEY *on Nervous Diseases*, page 168.

† A healthy boy, aged eleven, lost suddenly the power of speech, and was affected with spasmodic constriction in the muscles of his neck and back. For these complaints he took anthelmintics, antispasmodics, and tonics, which brought away fifteen Worms, but in five weeks left him speechless. Hoffmann being consulted, prescribed bitter purgatives and

more

hectic fever, hiccup,—apoplexy*, and finally, death itself.

After all that has been said, it is possible that a patient may labour under almost every one of the symptoms enumerated in the foregoing description, without having a single Worm of any sort!

The *Hydrocephalus*, either *externus* or *internus*, vernacularly denominated the *watery head*, or *dropsy of the brain*, exhibits a variety of symptoms similar to those occasioned by Worms; such as, short disturbed sleep; startings, grinding of the teeth in sleep; greediness of taking food; circumscribed flushing of the cheeks; sickness; pick-

more powerful anthelmintics, which soon restored the use of speech. *Sauvages* mentions a boy, who having passed, by the use of anthelmintics, thirty large Worms, in twenty days, recovered his speech which he had lost. *Townshends Elements of Therapeutics*. Genus CII. Sect. 2. *Mutitas*.

* *Apoplexia Verminosa*. Apoplexy has arisen from Worms.

ROWLEY on *Nervous Diseases*, page 486.

ing of the nose; and the urine often depositing a sediment of a light consistence and whitish colour: in short, there are so many symptoms appear, which are common to Worm-cases, dentition, and other irritating causes, that, as the great and good Dr. Fothergill observes, it is difficult to fix upon any which shall particularly characterize this disease*.

Perhaps the difference of arterial action in the one, and the other disease, may tend to point out, with other concomitant symptoms, the difference between the two. In *Hydrocephalus internus*, and that denominated by Dr. Rowley, *Hydrocephalus Membranarum*, the irregularity of the pulse is very striking; the rapidity of the pulse, beating from 100 to 150 at different times of the day, may be contrasted with its slowness at intervals, the pulsations being sometimes not more

* The pathognomonics of hydrocephalus internus, are in children, lassitude, slight pyrexia, pain in the head, a sluggish pulse, drowsiness, and dilated pupils. *Townshend's Elements of Therapeutics. Genus XXV. Hydroceph. intern.*

than from 80 to 96; whereas, in Worm complaints, although the arterial action may be increased, the pulse is regular.

The pains in the limbs, incessant head-ach, a sickness, with frequent vomiting, in which that action is not attended with pain, but the food is thrown up, plentifully, easily, and without straining; a strabismus or squinting, and at other times the brow contracted into a disagreeable, and, as it were, angry frown, without any apparent provocation; and in the more advanced stages, dilatation or immobility of the iris; impatience of any but a horizontal posture; the frequent application of the hand to the forehead, an almost continual drowsiness, and costiveness scarcely to be removed, may also in some measure, tend to discriminate the Hydrocephalus from other complaints. It is true, many of these symptoms, above enumerated, may arise from other causes than water in the brain; but in other diseases they do not so uniformly attend, nor continue so long. In fact, nothing but frequent opportunities of seeing both complaints can enable a practitioner to

judge accurately, which of the two the patient labours under ; and even with these advantages, the best judges may be mistaken. Dr. Fothergill acknowledges, that he met with two or three instances, in patients that had very strong appearances of being entered into the last stage of *Hydrocephalus internus*, but were happily recovered. They were actual Worm-cases, and were cured by anthelmintics. The doctor had been led, from the appearances that were similar to those which attend the *Hydrocephalus*; to conclude it was that disease, and to form an unfavourable prognostic*.

What tends more to deceive, and render it difficult to discriminate the one disease from the other, is, that it sometimes happens, that in the last stage of *Hydrocephalus*, as in many other diseases, when the patient is going to die, Worms are discharged. I do not find that any author has taken notice of this circumstance, except my respected friend and school-fellow, Dr. Charles William Quin, of Dub-

* Lettsom's Edition of Fothergill's Works, 4to. page 270.

lin*, whose Dissertation on Hydrocephalus Internus, I know not whether to admire most for the beauty of its language, or the accuracy with which the symptoms of this dreadful disease are described†.

There is also another disease incidental to children, which, from its appearances may not unfrequently be mistaken for a Worm complaint. It is

* Nonnunquam tamen, hic temporis vermes inferius dejiciuntur.

QUIN, *Diff. Inaug. de Hydrocephalo interno.*

† Morbum hunc ingruentem discernere, haud difficilius quam utile esse videtur; quoniam hic, si alicubi, principiis obsta, medico pro lege firma esse oportet.

In ipso primo ingressu, ægre à ventriculi debilis, dentitionis, vel vermium signis, hydrocephali hujus phænomena discernuntur; si verò emetico leni, necnon cathartico mercuriali propinatis, adhuc urgeant cephalalgia cum vomitu; si, præterea, lucis quædam adsit impatientia, et dolor inter scapulas ægrum premat; si, denique labem hæreditariam nobis suspicari liceat, in propinquo stare hydrocephalum plusquam verisimile est. Artuum spasmi quoque sæpius in dentitione et vermibus adsunt, quam illo hydrocephali tempore, quo maximo his similis sit affectibus.

Morbo aliquantulum invalescente, strabismus, et pupillarum dilatio, cum artuum pulsu tardo ac simul inæquali, pro certis fere hydrocephali interno indiciis habenda sunt, præsertim si signa jam enumerata hisce prægressa fuerint.

Versus, finem tendente morbo, stupor, oculorum caligo, pulsus frequens, et membrorum distensiones, lethalem hydrocephali terminum demonstrant. *Ibid.*

caused by an obstruction of the mesenteric glands, and is called *Tabes Mesenterica*, and by others the *Mesenteric Fever*. It most commonly makes its appearance in children from the age of two to four years; but in scrophulous habits, shews itself until the eighth or tenth year; or even beyond that period, when the constitution is highly scrophulous; a fever, either remitting, or intermitting, hardness of the belly, irregular appetite, irregular state of the bowels, paleness of countenance, or else a circumscribed redness of the cheeks, as in hectic patients; prostration of strength, and an emaciated state of the body and limbs, are the symptoms most commonly attendant on *Tabes Mesenterica*. Seeing then, that in other diseases, so many symptoms arise, similar to those which are occasioned by Worms, it is absolutely impossible to say, to a positive certainty, that a patient labouring under even the greater number of the symptoms laid down, has Worms; the only diagnostic sign then, which can possibly enable us to ascertain, without fear of being mistaken, their presence, is, THE SEEING WORMS, OR PARTS

OF WORMS DISCHARGED*, either downwards, or by the mouth; and when we see them thus expelled, we may be sure there are more. Monro, however, regards a dilated pupil as diagnostic of Worms, and says, if it cannot be considered as a pathognomonic sign, it may be looked on nevertheless as an excellent diagnostic.

All the foregoing symptoms may be accounted for as arising from one or other of these three causes.

I. The debility, ravenous appetite, paleness, costiveness, hardness of the belly, and flatulence, are occasioned by a deficiency of that chyle or nutriment, which should go to our support, but which is greedily devoured by the Worms, almost as fast as it can be secreted.

II. To matter, thrown off or discharged by the

* "The ambiguity of every symptom ascribed to Worms, except that of voiding them, is well known."

Medical Essays. Vol. II. Art. 18.

Worms, may be referred, that peculiar smell of the breath so remarkable in some children; the discoloured appearance of the stools; fetid and sour eructations, diarrhœa, &c.

III. From irritation of the intestines, proceed sickness, vomiting, itching of the nose, swelling of the upper lip, tenesmus, convulsions, St. Vitus's dance, epilepsy, catalepsy, tetanus, and all the train of evils arising from nervous affections.

CHAP. IV.

CURE.

WHEN, from the existing symptoms, all other circumstances considered, it is known, or suspected, that *Worms* are the cause of disturbance in the system, it becomes our business to get rid of them as soon as we can, and with as little danger to the patient as possible.

In this view, the indications are, first, to administer such medicines as will oblige them to let go their hold, and dislodge them from their situation; secondly, to expel them from the body; and thirdly, to prevent a return of the complaint, by such medicines and regimen as will invigorate the system, and prevent the accumulation of viscid mucus in the intestines.

Many and various have been the medicines exhibited, and even celebrated, for the expulsion of these intestine enemies.

Bitter purgatives, oily medicines, chalybeates, preparations of tin, iron, and zinc; garlic, helleborafter, the root of the male fern, which is the basis of Madam Nouffer's celebrated Swiss remedy——drafftic and resinous cathartics;—the juices of plants celebrated for their anthelmintic qualities, have all had their turn, and all, in their turn, have failed.

Bitters will not prove effectual, for *Le Clerc* tells us, that he found worms, not only in the liver, but in the gall-bladder itself, of a sheep which he dissected; which were active and lively, swimming in the gall itself, the bitterest of all the secretions*.

Oils, which kill all other insects, will not here

* *Le Clerc*, *Hist. Lumbr. lat.* p. 94.

answer. It is true, it may destroy a few *Ascarides* in the vicinity of the rectum, when administered as a glyster: but how is the oil to be conveyed into the jejunum, or ileum, unaltered, so as to drown the *Teres*, or a *Tape Worm*? The tract of the intestines it has to pass through, and the changes it undergoes before it reaches the seat of Worms, render it inert. But we are even told the experiment has been made of putting live *teretes* into common oil, in which they have lived and moved for *several hours* *.

Practitioners not attached to any particular remedy, among those generally considered as specifics, place dependence on mercurials; but mercury, in all its various forms, has been exhibited in

* Nonnulli affirmaverunt ad vermis vitam necesse est, ut quædam materies perspirabilis e corpore prodeat, et hanc repellendo, vermis necari dicitur. Hinc, OLEUM exhibetur; hæc opinio in incerto est, et, si vera sit, a longitudine intestinorum vix possibile erit ut immersio vermium oleo perfici possit: Ab experimentis illustr. Torti satis evidenter apparet, *vermes teretes* in oleo communi per plures horas commode vixisse.

Broughton, Diff. Inaug. de Vermibus intestinorum.

many millions of real Worm cafes, without any other effect than injuring the constitution.

And here I must take permission, for the sake of the sons and daughters of Africa, and their descendants, to make a few observations on the indiscriminate use of mercury, as a vermifuge, in the *West India Islands*.

Mercury, unless very cautiously given, and in very small quantities, is rank poison to the constitution of a negro. The many fatal effects I have seen, in the course of several years practice in the island of Jamaica, convince me of the truth of what I have here asserted.

Such practitioners, therefore, (and I have known such,) who indiscriminately administer mercurial preparations to the negroes entrusted to their care, consult neither their own reputation, nor the interest of their employers, whose number of slaves is too often lessened, and many useful, healthy negroes destroyed, by the too frequent, and rash exhibition, of that excellent, but dangerous mineral.

—Nor

—Nor are its pernicious effects confined to the Blacks.—White people often feel the ill consequences of an indiscreet use of it.—Mercury is to be used with much less freedom in warm, than in cold climates—and the same quantity, which shall not produce any sensible effect in Europe, will in the same constitution, within the torrid zone, operate in a powerful manner*.

The blood of such negroes, as work hard in hot climates—take but little rest, and live mostly upon a vegetable diet, will, even in an healthy state, be found much thinner, and less disposed to coagulate, than that of white people. Mercurial medicines, therefore, are hurtful, by breaking down and destroying the texture of the blood, already too much dissolved, by heat, and the nature of their provisions.

* The yellow fever affords an exception to this rule. It is astonishing how much mercury may be taken by patients labouring under this dreadful disease, without exciting ptyalism. Ten grains of calomel every six hours, continued for several days, is no uncommon practice; and this bold exhibition of it, according to the best accounts I can learn, has been attended with the happiest effects.

In Jamaica, it is too common a custom to send a negro, that receives the slightest scratch, or has the least sore on the leg, or foot, to the hot-house*, where

* Upon plantations in the West Indies, the apartment appropriated for the use of the sick and lame negroes belonging to each respective plantation, is called, in Jamaica, the *hot-house*—in the other islands, with more propriety, the *sick-house*. I cannot say I ever saw above *ten* well-contrived sick-houses in my life. *One* of the best that ever I saw, and what may well be considered as a pattern for others, is at Water Valley, in St. Mary's, (the north-side of the island of Jamaica) the estate of Doctor James Nafmyth, a gentleman to whom I am much obliged for many curious particulars relative to the medical properties of many of the Jamaica plants.

This improper, and absurd appellation, *Hot-house*, has been productive of more mischief, than many proprietors are aware of.

A house for the sick ought to be as cool, airy, and clean, in those hot climates, as possible; but instead of this, the managers, or overseers, to whom the building of the Hot-house, as well as every other office belonging to a set of works, is too often entrusted, seem unwilling, that such a building should have its name for nothing; and therefore take care that it shall be *literally* a *Hot house*, by building it closer, and with fewer windows, than any other house on the estate. Nay, I have actually seen Hot-houses without any other aperture for the admission of air or light, than the door! Architects who build after such a fashion as this, must have taken their ideas from the black-hole at Calcutta.—What must the poor wretches suffer, who are locked up at nights, sometimes as many crammed together as the place will hold—in such infernal dungeons, under the notion of “*getting them well*” of their different complaints!

And

where the poor wretch is immediately confined to the stocks, that the sore may not be enlarged by walking about ; and there dosed, twice a day, with a solution of corrosive sublimate in rum, administered in a cup of the decoction of sarsaparilla, or lign. guaiacum. In a good habit the confinement, and keeping the wound clean, will effect a cure ; but though in more obstinate cases, alteratives

And these absurdities will ever triumph over common sense, so long as overseers are permitted to be architects, whether they know any thing of the matter, or not.

It is not to be denied, that among overseers, are to be found many men of genius, men of liberal education, and, in every respect, unexceptionable. But I am sorry to say, that far the greater number are strangely deficient in points wherein they think themselves amply informed. Indeed, in points wherein, it is absolutely necessary, they ought to be well informed.

I have known many people, who, though they had not a single idea abstracted from making the most of a sugar cane, set up, on being made overseers—for men of universal knowledge. A man of this stamp, as soon as he enters upon his office, becomes in a moment, like the Pope, *infallible*. He not only decides with authority upon all questions relative to the business of *plantership* and *sugar-making*, but, as if by inspiration, he commences architect, surveyor, doctor, grazier, distiller, and politician—*cum multis aliis*—and it most commonly happens, that he who would seem to know every thing, and be a proper judge of every thing, knows, in fact, nothing at all.

may

may be, and certainly *are*, necessary; yet, the indiscriminate exhibition of Van Swieten's solution, as they call it, to every negro that has a little fore on his leg, does more harm than good. I have known many good constitutions much injured by its use, and dropfies brought on by those medicines that were intended at first to cure a fore leg.

In like manner, mercury administered with intent to kill worms has often brought on a worse disease; rheumatism—bone-ach, from taking cold—consumption, asthma—confirmed ascites—have but too often followed the injudicious use of that mineral.

If mercury be given at all for the expulsion of Worms, the safest way of administering it has always appeared to me to be in small doses of Dimf-dale's powder*. But even this is not always effectual. And it is very extraordinary, that where

* Calomel & Pulv. e chel. Cancror. comp. aa gr. iij. Antimon. Tartarizat. gr. $\frac{1}{8}$ vel $\frac{1}{10}$.

Nature has pointed out and supplied us with the noblest and safest anthelmintics, the preparations of *Art* should be substituted, and preferred, though inferior in virtue, and more hazardous in their consequences.

Few or none of the European medicines are equal in efficacy to those vermifuges which the East and West Indies supply us with.

The *Worm-grass* is highly commended by many, and is allowed a place among the first Anthelmintics, by those who have been accustomed to give it. Its use principally obtains among the free black and Mulatto women of Jamaica, who make a livelihood by practising physic among those of their own colour, with the medicinal herbs which nature so abundantly bestows in that climate.

It is the *Anthelmia* of Dr. Browne, and the *Spigelia* of Linnæus.

The preparations of it are an infusion, decoction, and the clarified juice.

Dr.

Dr. Browne, who, in his *Natural History of Jamaica*, gives us the best methods of preparing it, speaks very highly in its praise. Those, to whom it is administered, are first affected, as if with a degree of intoxication. It then procures sleep almost as certainly, and in the same degree as opium; and the patients eyes, after the sleep is over, appear sparkling and distended. However, the exhibition of it is not unattended with danger; if the dose be too little it will do no good, and excess in the dose, I have known productive of disagreeable effects.

The *Asclepias* *, which is the *Apocynum erectum*, folio oblongo, &c. of Sloane—from its emetic quality, called Bastard, or Wild Ipecacuanha, and by the negroes, Red-head, is a powerful vermifuge.

The usual way of administering it, is either in a decoction, or the expressed juice of the leaves. Of the former, half a pint is the usual dose to an

* *Asclepias erecta*, foliis angustis acuminatis, verticilliter ternatis floribus umbellatis. BROWNE.

adult, when intended as an emetic. In the latter form, from a tea-spoonful to three table-spoonfuls may be given as an emetic, according to the age, constitution, and strength of the patient. The expressed juice may also be made into a syrup with sugar.—I have known it to bring away worms (after operating as an emetic) from patients in whom there never appeared any symptoms of them. If there are any in the stomach, it certainly dislodges them. When the crude juice is to be administered, I would recommend an addition of an equal, or a double portion of lukewarm water with it, which makes it operate more gently, and likewise more effectually.

Browne says, the juice is a powerful astringent. I cannot say I ever knew an instance of its being astringent, and therefore imagine he must have taken his account, not from his own experience, but the report of others.

The bark of the *Bastard Cabbage-Tree* (*Geoffrea Inermis*,) stands among the first, in the list of powerful vermifuges,

It

It is the bark of a tree, very frequently to be met with in the mountainous parts of Jamaica, which grows to a considerable height. The bark is of an ash colour, sometimes spotted with reddish, or iron coloured spots—The outer thin bark, or epidermis, being peeled off, the inner bark appears, when dry, of a rusty iron colour, and its *interior* surface of a cineritious hue. Altogether, when stripped off the tree, and kept for use, it is not unlike the eleutheria, or cascarilla bark. The wood of the bastard cabbage-tree is exceedingly hard and durable, and much used for the purposes of building, where strength and stability are required. The leaves are oblong, oval, smooth, and of a beautiful green colour, disposed in a pinnate form along the stem*.

Of this tree, there are said to be two sorts, the male, and the female. The bark of that only which is called the FEMALE *Bastard Cabbage-tree*, is ap-

* Since the publication of the former editions of this Work, Doctor Woodville's MEDICAL BOTANY has made its appearance in the world, in which a much better account of the *Geoffræ inermis* is given, than is to be found in any other Author. See his *Medical Botany*, Vol. II. page 306.

plied to the purposes of medicine. This latter, in the months of April, May, June, and July, appears most beautifully adorned with very large spikes of papilionaceous blossoms, of a purple colour, which are succeeded by a fruit, of the shape, size, and appearance of a green walnut; being a drupa, containing one oval kernel, inclosed in a hard, smooth, thin shell—*.

The

* Doctor Browne has given a very imperfect account of this tree, in his Natural History of Jamaica—He has not described it in its proper place, but refers it to his appendix, which treats only “*of those vegetables whose characters are not sufficiently known.*”—Why he should call it a *Spigelia*, I cannot conceive, unless it was because he was fond of altering Linnæus’s names,—and as he had chosen to give Linnæus’s *Spigelia*, the worm-grass, his new name of *Anthelmia*, (or, as one of his editions has it, “*Anthelmenthia*,”) he thought proper to transfer the name of *Spigelia* to *this* tree, which has not the least resemblance of a *Spigelia*.

He seems totally ignorant to what class and order it belongs, as also of the characters of the flower, which he leaves undescribed. I have endeavoured to supply his deficiencies, by adding that part of the under-written description which is printed in *Italics*—and which, though not strictly conformable to the rules of Botany, may nevertheless be found sufficient to convey an idea of the flower.

SPIGELIA foliis oblongis nitidis pinnatis, cortice glabro cinereo.

Flores in aliis masculini, in aliis fœminini dicuntur.

MAs desideratur.

FœM.

The most usual way of exhibiting this bark, is in decoction. About an ounce, or an ounce and a half, grossly powdered, may be boiled in a quart of water, until it is reduced to half a pint. By this time, the decoction becomes very high coloured, like old Madeira wine, or porter; but if it should not then attain that colour, (which is generally looked on as the criterion of its being properly prepared) the boiling must be continued longer; for in a strong decoction only the efficacy lies.

FCÆM. Perianthium? *Monophyllum, campanulatum, quinque-crenatum, purpurascens.*

Corolla? *Papilionacea: Vexillum amplum, cordato-ovatum; Alæ oblongæ; Carina bipetala.*

Stamina? *DIADELPHIA: Filamenta decem, quorum, novem infernè connata, supernè, libera sunt. Decimum vero simplex, à cæteris sejunctum exstat. Antheræ minimæ, oblongæ.*

Pistillum. *GERMEN ovatum. STYLUS brevis attenuatus, aduncus, subulatus. STIGMA acutum.*

Pericarpium. *DRUPA carnosæ, firma, ovata, lineâ longitudinali lateraliter notata, unilocularis, monospermis.*

Semen. *NUCLEUS bilobus, ovatus, membranâ tenui obvolutus, & naucæ ligneo glabro, lineâ longitudinali lateraliter notato, tectus.*

The

The taste of this decoction is not unpalatable, nor is it from any bitterness that the bark derives its efficacy, as some have imagined; but from a specific quality, powerfully noxious to all kinds of worms bred in the human body.

The dose to children, is from a table spoonful, to a small wine-glass full. Adults of a strong constitution may venture on a large wine-glass full. Of this decoction, a dose proportionable to the age and constitution of the patient is to be given, either simply, or sweetened with honey, sugar, or molasses, for three or four mornings successively.

A dose of some medicine of the purgative kind should be then interposed—such as jalap—rhubarb—sal. Glaub. or what is still better, as more immediately answering the intention, an ounce of oleum ricini.

Besides the decoction, this bark has been found efficacious, when taken in substance, finely powdered.—From five grains to a scruple, may with
safety

safety be ventured on, and even farther: combined with jalap, it operates with greater certainty of success than when exhibited by itself.

Some years ago, the small-pox happening to make its appearance in that part of the island of Jamaica where I resided, it was thought expedient on that occasion to make preparations for inoculating all persons, both white and black, that had not had this disorder.

Those white people, whom I attended, and the negroes belonging to the different estates and settlements which I had the care of, were forthwith put under a preparatory regimen.

The antiphlogistic method, recommended by Baron Dimsdale, as being the most applicable to the climate—(as well as the most rational, in *any* climate) is of course the most universally adopted in that part of the world.

The mercurial preparation, given over night, I did not strictly adhere to. To the strongest negroes,
the

the quantity of calomel given for a single dose, never exceeded three grains.—To some, I judged it altogether improper to give any.

But as the very small annual sum allowed to surgeons, for the care of negroes in the country parts, will not admit of the exhibition of very expensive medicines, I was reduced to the necessity of setting my invention to work, to find out a cheap purgative, that should at the same time be safe and efficacious.

The four-o'clock-flower (*Mirabilis Jalappa*) grew in great plenty about the place. This is the *jalapium officinale*; and the roots of this, sliced and dried, were not to be distinguished from the common jalap of the shops.

But whether from the difference of climate, or soil, the Jamaica jalap has not the same effect as that which is brought to us from South America; I was obliged to give it in double quantity; and even then it did not always take effect. The largeness of the dose rendered it disgusting.

At last, I determined to try how far the cabbage-bark, combined with a small quantity of the true jalap, might assist its operation; or rather, what effects might be the result of such a combination. I gave ten grains of jalap only, with ten grains of the bark, in water, to an adult, of a robust constitution. It succeeded beyond my expectation as a purgative. I made a few more trials with equal success.

After this, I prepared a large quantity of equal parts of jalap and cabbage-tree-bark, as a common purging powder for negroes of all denominations, which I found to answer very well in doses of half a drachm; and in some few cases wherein it did not operate so well, two or three grains of gamboge, thrown in, to quicken its operation, produced the desired effect.

This experiment convinced me of two facts. First, the universality of the complaint of worms among negroes; for, of *two hundred and fifty-four* negroes, whom I had then under preparation, *two hundred and sixteen* took the cabbage-bark;

of

of whom, *one hundred and ninety-three* passed worms, after taking the powder two or three times. Among these, I do not reckon several new negroes, and others that I could expect no exact account from. The remaining number, to whom I *did not* give the bark, were either such as from their constitution required other treatment, or else belonged to persons who supplied their own medicines.

From that time, I constantly adhered to the use of the Cabbage-bark, and in the subsequent course of my practice, made the decoction of that bark the common vehicle for all medicines of the aperient kind, such as jalap, pulv. rhei, magnesia, &c. both to white patients and negroes, whenever particular circumstances did not forbid it; nor did I ever perceive any bad consequences arise from so indiscriminate a use of this medicine.

I was now desirous of examining how far a spirituous tincture of it might be of use; and infused four ounces of the bark, grossly powdered, in two pints of rum, which I digested in the heat of the

fun for six days. Of this tincture I gave a small wine-glass full, instead of a common dram, for five or six mornings running, by way of gratuity, to two or three lusty fellows that I knew to be subject to worms; but though they liked the dram, and came regularly for it, I never could find whether it had the desired effect.

I drew a very small quantity of extract from a pound of the gross powder boiled in a gallon of water. This I gave in the quantity of a grain—then two grains, and by degrees as far five, to three subjects I had chosen; but I found no remarkable effects from it, prepared in this manner. One of those who took it was seized with a violent sickness at the stomach, but whether it arose from the effects of the extract, or from some other cause, I had not leisure to examine.

However, as I had already two very good and simple preparations—the *decoction*—and *powder*, I desisted from all farther enquiries into the virtues of the more operose preparations.

But

But notwithstanding I had so much reason to be satisfied of the *general* efficacy of this bark, I found my hopes disappointed in two or three very obstinate cases, wherein, after almost every other anthelmintic, both native and European, had been tried in vain, I expected to derive very considerable advantages from a timely exhibition of the cabbage-tree bark.

The ill success of the bark in those cases, induced me to make some enquiry concerning a medicine which I had heard of, as being successfully given, in many parts, to all patients afflicted with complaints arising, or supposed to arise, from worms; and that, not only by regular practitioners, but even by ignorant negroes, at random, and without any just proportion in the dose.

This was the *STIZOLOBIUM*, or *COWHAGE*.

Satisfied, as I said before, of the general efficacy of the cabbage-tree-bark, I had never given myself the trouble to make enquiry about any other more powerful vermifuge; nor did I think that

there *could* be one more powerful, until the death of a negro girl, evidently occasioned, as appeared upon my opening her, from vast numbers of worms lodged in the small intestines, convinced me that I had not done my duty, and excited me to push my enquiries in search of a more efficacious medicine still farther.

I had heard so much of the *cowhage*, or *cowitch*, that I resolved to make trial of it.

The substance which is known by this name, is the rigid, hairy coat, somewhat in appearance similar to the pile of velvet, or rather, plush, of a reddish brown colour, which grows on, or clothes the surface of a pod, in appearance like the pod of our English scarlet bean, to which plant indeed, the whole of the Cowhage-vine, both in its foliage, and manner of growth, bears a very near resemblance. This hair, or pile, scraped off and mixed in some viscid vehicle, is the part to be employed. The rest of the plant is useless.

But the different modes of exhibiting the Cowhage,

hage, were as various as the persons who took upon them that office. One administered it in molasses. Castor oil was the favourite vehicle of a second; and a third insisted, that it was of no service unless mixed with honey.

The greater number agreed in giving molasses the preference; but there was even among these, a considerable disagreement with regard to the proportions to be observed in the mixture. While some cautiously put but two pods of the cowhage into a quart of molasses, others boldly stirred up two dozen in a like quantity. Some again would have six pods to be sufficient; and others imagined that some secret virtue, or charm, was to be expected, from having the number neither greater, nor less, than exactly *nine*.

By some, the setæ contained on the outside of a single pod, mixed with one or two table-spoonsful of syrup, honey, or molasses, was given for a single dose, without distinction, to young and old. By others, a quantity of each ingredient was mixed

D 4

together,

together, without bearing any exact proportion to each other, farther than was merely sufficient to bring the composition to the consistence of an electuary; and one, two, or three tea-spoonsful given as a dose to children, and one, and sometimes two table-spoonsful to adults.

As far as I could learn, however different the compositions and proportions of the ingredients, the effects were found to be pretty much the same in all ages, sexes, and constitutions.

I considered, that the wonderful efficacy so generally attributed to the Cowhage, could not be supposed to arise from any specific medicinal quality residing in it, so much as from the sharpness and elasticity of the setæ, with which the pods are covered, which take the same effect on worms, as they do when applied to our skin. The setæ piercing, vellicating, and tormenting them in such a manner, as obliges them to let go their hold; acting like so many needles, as may be plainly demonstrated by viewing the setæ through a microscope;

scope; which shews them to be a number of long spiculæ, needle-shaped; hollow, transparent, and armed with points, exquisitely sharp and fine.

The idea, that their action is merely mechanical, is supported by the observations of several very judicious enquirers, who have made trial of the cowhage, who all agree in the opinion that it acts in the same manner as hair, cut fine, and given with the same intention—but much more effectually, because of its inflexibility, and the exquisite, and almost inconceivable sharpness of its points.

Curious to know how far the application of the setæ to the external coats of worms bred in the human body would affect those animals when expelled from the body, I waited not long before I had an opportunity of making the experiment.

A calabash full of very large ones, of the *teres* kind, in full vigour, voided by a poor emaciated patient, was brought to me. Among these, I sprinkled some of the setæ. For a minute or two,

no visible effect was produced ; but in a little time they began to writhe and twist themselves in an unusual manner, and exhibited evident signs of extreme torture. I took one of the worms, and viewing it through a magnifying glass, perceived that several of the setæ had pierced very deep, and others were sticking loosely in various parts of its body, but that none of the spiculæ, which had once entered into the skin, dropped off.

Convinced in a short time, both from what I had heard, and from my own experiments on the internal exhibition of cowitch, of the safety and efficacy of this incomparable medicine, I laid aside the cabbage-tree-bark, and for several years have used no other vermifuge than this.

My usual way of preparing and administering the Cowhage, is in the form of an electuary, with honey, molasses, or syrup of a thick consistence. Formerly I was not in the habit of observing any exact proportion of the quantity of the setæ ; but as, since the publication of the former editions of this Treatise, the demand for it has increased beyond

yond my expectations, I have found it necessary to adopt certain formulæ for ascertaining the proportions; which proportions, although I find them in general to answer very well, I nevertheless, in some particular cases, find it necessary to vary; for there never yet existed any general rule, to which some exception or exceptions could not be found. After repeated trials and experiments, in the course of five and twenty years, (during which period I have been in the constant habit of exhibiting the Cowhage as an anthelmintic,) made with a view of finding out the best vehicle for this substance, I cannot say that I have found any less exceptionable, than the good old vehicle,—common treacle, such as is to be had at every grocer's. I have tried conserves, but children cannot be prevailed on so readily to take them. Honey would not be an incommodious vehicle, but it is not with every stomach honey will agree; for it is well known, that in some constitutions, violent colicky complaints are brought on by the smallest quantity of honey,—or even by drinking any kind of vinous liquor in which honey enters as an ingredient:—and there are these advantages

in treacle;—First, that every body knows what it is:—Secondly, there are few children who do not like it:—Thirdly, it is not apt to be spoiled, or to ferment, unless kept in too warm a place:—And lastly, it is gently aperient, and, in that view, an auxiliary to the principal ingredient. But if from a dislike of treacle some other vehicle would be preferred, raspberry jam or currant jelly will prove very good substitutes.

At the request of some indulgent parents, in order to *cheat* into compliance such of their children as could not be prevailed on to take any thing that has the appearance of a *medicine*, I was induced to turn in my mind how to exhibit the Cowhage in the form of a lozenge; and after some trials succeeded in fixing on a formula that answers pretty well. It consists of a due proportion of things extremely simple:—sugar, Indian arrow-root, and gum tragacanth, but no efficient article, except the Cowhage—unless in some few instances of private practice, or at the desire of the medical practitioner who attends in the family of the patient.

But,

But, though I have had many communications of the good effects of the Lozenges, I cannot say I place so much dependance on them, or recommend them in my own practice, (unless where I meet with refractory and spoiled children, that are masters and mistresses over their mamma's,) as I find the simple electuary, made with nothing but Cowhage and treacle, answer every purpose.

Of this electuary, a tea-spoonful is in general found to be a sufficient dose for children, from infancy to the age of six or eight; from thence to fourteen, a desert-spoonful is found to answer well, and for all above that age, a table-spoonful. Formerly I thought it might be sufficient if taken once a day, but experience has shewn me, that it answers better when taken twice; viz. at night, going to bed, and in the morning AN HOUR BEFORE BREAKFAST; and though little or no previous medicine is necessary, yet it is *generally* found to operate more effectually where a *gentle emetic* (provided nothing forbids it) has been premised.

The

The Cowhage, after being begun upon, is to be continued for three or four days; after which some brisk purgative, such as jalap, or infusion of senna, or in short, whatever purging medicine is known to agree best with the patient, is to be taken; which will in general bring away the worms, if there be any. Afterwards the Cowhage is to be continued as long as there may seem occasion; repeating the purgative at intervals of three or four days.

For the Tape Worm, long experience has taught me, that the Cowhage does not prove so effectual as against the other worms, unless the quantity of setæ be doubled. In very obstinate cases, I sometimes find it necessary to increase the quantity of setæ even to a threefold proportion; for they will not easily be made to let go their hold, which they are as tenacious of, as they are of life. Professor Pallas* poisoned a dog with the *Semina Staphidis-agriæ*, and on opening him after he had been

* Pallas. *Diff. Inauguralis de infestis viventibus intra viventia.*

dead for some hours, found, together with the poisonous seeds, several living lumbrici and small tape-worms.

Every one that knows what Cowhage, or Cow-itch, is, must be sensible, that if the least particle of it comes in contact with the skin, it causes a most intolerable itching, and sometimes, in very delicate skins, no small degree of inflammation, where it fixes. A single bristle of it, so small as to be invisible to the naked eye, is sufficient to cause this inconvenience for a time, but it soon goes off. Microscopic observations shew us, that the setæ are hollow, and conical, gradually lessening from the base, until they terminate in the finest point that can possibly be imagined.

Here, then, the question may very naturally be asked, “ If these finely pointed spiculæ, when
 “ applied externally to any part of the surface of
 “ the skin, occasion such tormenting and intol-
 “ rable itching, sometimes almost even to mad-
 “ nefs, may there not be danger of injury to the
 “ coats of the stomach and intestines from so
 “ many

“ many sharp swords, as it were, received into the alimentary canal ?”—To this I answer, not the smallest degree of danger is to be apprehended. The many thousands, who have taken it without any ill effect, shew its perfect safety. If a little honey, or treacle, be found sufficient to defend the tender nervous papillæ of the lips, fauces, and œsophagus from the troublesome effects of the setæ, certainly the mucus of the stomach and intestines, which is the guard provided by nature to protect the villous coat of these viscera from injury, will be very sufficient to defend those parts from the irritation of the setæ.—A daughter of my own, when about five years old, contrived to lay hold of a gally-pot that contained between three and four ounces of the common preparation of it; and, secreting herself in a corner, made one meal of what was intended to last her for three or four days,—but without any other inconvenience than a smart diarrhœa, which did her more good than harm.

I can with truth aver, that I have never yet met with, in my own practice, any ill effects resulting
even

even from the most liberal use of the Cowhage in any form; and, although I have, both publicly in print, and in every other way, for these twenty years past, set forth, that “if any disagreeable symptoms, or any inconvenience whatever, caused or supposed to be caused, from the use of it, should ever be noticed by those who take or administer this vermifuge, I should consider the communication thereof, by letter, stating circumstantially the effects or inconveniencies complained of, as a very particular favour,” I have never received, in all that time, more than two communications to that purpose; the one from the husband of a West India lady at Bath, who stated, that he thought it had done his wife more harm than good*, but did not enter into particulars; the other was verbally communicated by Doctor Hooper, who related to me that he not long ago gave some Cowhage to a patient, in the Mary-le-bon Infirmary, whom he suspected to have worms;

* The Physician who recommended this lady to my care, did not think it a Worm case. “En, tibi mitto Dominam S——, quæ veribus graviter laborare se existimat, et Stizolobium fumere vult; sed vermes ejus ut ego credo, non nisi in Cerebro sunt.”

that after taking it once, symptoms of enteritis appeared; which induced the Doctor to discontinue it, but at the same time, Dr. Hooper very candidly added, that it is possible the man might have had enteritis, even if he had never taken any Cowhage.

And here I shall beg leave to repeat the request stated in the preceding page, to which (to avoid repeating the same thing over again) I refer my readers;—at the same time adding, that to do away all possibility of suspicion that unsuccessful cases, communicated to an author himself, may be suppressed, I have to request that all cases wherein the Cowhage may have been supposed to be prejudicial, may be communicated, not to myself, but addressed to my worthy friend Dr. Bradley, No. 25, Parliament-Street, the respectable editor of the Medical Journal, who has most kindly undertaken to receive all such communications, provided sent free of postage.

After all that has been said respecting the safety of Cowhage, nevertheless, however inoffensive in
general

general it may be, reason will dictate to us, that where the mucus of the stomach and intestines is abraded, or lessened, from dysentery, cholera-morbus, or any other cause whatsoever; or where there is a tendency towards inflammation in any part of the intestinal canal, the exhibition of this medicine cannot be unattended with danger.

I shall not go so far as to say, in praise of this my favourite medicine, that I *never* knew it to fail; but I will say, that I have experienced more certain good effects, and fewer ill consequences, than from any other medicine, given with the same intention; insomuch, that I have, since I first began to exhibit the Cowhage, had no occasion to look for any other vermifuge.

In the choice of Cowhage, care should be taken to have it good. That which is musty, of a bad colour, and which has lain long in damp warehouses, is to be rejected. I once was very near bringing myself and the *Dolichos* into disgrace, by employing some which I had been obliged to purchase in London, in consequence of a ship's
being

being captured in its homeward bound passage from Jamaica, which had on board a consignment of the article, coming to me. How it happened, or where the article which I bought originally came from, I do not know ; it looked very well, but certainly it did not answer the purpose. On complaint being made of its inefficacy, I examined it more narrowly, and found it was deficient in that elasticity of the setæ, which good Cowhage ought to have; of course discontinued to use it.

For this reason I never depend on any, except that which I import myself from Jamaica, from whence I have a constant supply of it, through the good offices of my brother, Mr. Richard Chamberlaine, Surgeon, of Kingston.

ATFER-TREATMENT.

WE are not to suppose, that after worms have been expelled from the system, the patient is never again to be troubled with them. The same causes existing, which proved favourable to their multiplication

multiplication in the first instance, will favour their regeneration. We are not therefore to sit down, content with having got rid of our enemies for the present, and with them a great number of bad symptoms which they occasioned, but so to invigorate the constitution as to prevent, if possible, their future attacks. In cases where they have greatly debilitated the system, much attention is required, to enable the patient to recover strength. But, as no practitioner whatever can be ignorant of what is necessary to be done on such occasions, to enter into any long discussion, on this part of the subject, would be superfluous.

As far as medicine is concerned, the tonic plan will be proceeded on; the Peruvian bark, quassia, preparations of steel, and though last, not least in estimation, a well prepared decoction of the bark of the *salix latifolia*, or broad-leaved willow bark, recommended by Mr. G. Wilkinson, Surgeon, of Sunderland, in a late publication of his on that subject; and which, as far as I have made trial of it, seems well to merit the recommendation
given

given of it, both by the author, and the reviewers*.

To those who can afford it, country air and exercise on horseback; cold or sea bathing; a due proportion of animal food; a few glasses of good wine after dinner; good porter, *if such a thing is to be had*—in short, every thing that is nutritious and strengthening, will tend to fortify the system against the future attacks of these insidious enemies.

* “The great price of that excellent foreign drug (*Cinchona*) and the extensive and shameful adulterations to which it is often liable, render it highly desirable to encourage the number of its substitutes, and to ransack all our fields and woods for indigenous vegetables which may be possessed of similar properties. The *Salix* certainly deserves a place in our *Materia Medica*.”

Medical and Physical Journal.

“It (the *Salix*) doubtless is a remedy of considerable efficacy, and is strongly recommended by its cheapness, and the facility of acquiring it. It appears to be useful in most cases where the *Cinchona* or Peruvian bark is usually resorted to.”

Medical and Chirurgical Review.

CHAP. V.

DESCRIPTIONS OF THE DOLICHOS PRURIENS,
AND TESTIMONIALS OF ITS UTILITY.

SOME years after the publication of the former editions of this Treatise, DR. WOODVILLE obliged the world with his ingenious and very useful work, intituled MEDICAL BOTANY; in the third volume of which, at page 468, a coloured plate of this plant is given, together with the following very accurate description.

DOLICHOS PRURIENS. *Cowhage Dolichos.*

SYNONYMA. Dolichos. *Pharm. Edin.* Phaeolus Zurratenfis filiqua hirsuta, Couhage dicta. *Raii Hist.* p. 887. Ph. Americanus, foliis molli lanugine obfritis, filiquis pungentibus, semine fusco, punctato. *Pluk. Phyt. p.* 214. *f.* 1. Ph. utriusque Indiæ, lobis villosis pungentibus minor. *Sloane Jam.*

Jam. Vol. I. p. 37. Ph. virgatus hirsutus pruriginous. Plum. Spec. 8. Stizolobium spic. multiflor. pend. alarib. Browne Jam. p. 290. Cacara pruritus. Rumph. Amb. Nai-corana. Hort. Malab. Dâu-ngûa. Fl. Cochín, &c. &c.

Class Diadelph. Ord. Decandria. Linn. Gen. Pl. 867.

Eff. Gen. Ch. Vexilli basis, callis 2 parralelis, oblongis, alas subtus comprimentibus.

Sp. Ch. D. volubilis legum : racemosis, valvulis subcarinatis hirtis pedunculis ternis.

The root is perennial, fibrous ; the stem, herbaceous, climbing, cylindrical, hairy, divided into many branches, which twist round the neighbouring trees, and rise to a considerable height ; the leaves are ternate, and stand upon long footstalks, placed alternately, at the distance of a foot from each other ; each pinna, or lobe, is entire, ovate, pointed, smooth on the upper side, on the under hirsute ; the lateral lobes are oblique, and somewhat

what larger than that in the middle, which is of a rhomboidal shape: the proper footstalks are short, and furnished with small stipulæ: the flowers are large, of a purplish or violet colour, and placed mostly in ternaries upon short peduncles, and form pendant spikes, which arise from the axillæ of the leaves, and are about a foot in length: the calyx is bell-shaped, gibbous at the base, lax, downy, divided into two lips, of which the upper is semi-ovate; the under separates into three lance-shaped segments: the corolla is of the papilionaceous order, consisting of a *vexillum*, (standard,) which is roundish, entire, concave, obtuse, and double the length of the calyx; two *alæ*, (wings,) which are oblong, obtuse, concave, and twice the length of the *vexillum*; a *carina*, (keel,) which is scythe-shaped, of the length of the *alæ*, compressed, and at the apex furnished on each side with a short concave spur; the filaments are ten, nine of which are united at the base; they are alternately longer and shorter, the former are four times the breadth of the others, and are supplied with incumbent antheræ; but the antheræ of the latter are placed vertically: the germen is oblong, villous, and sup-

ports a slender style, about the length of the filaments, terminated by a small orbicular stigma; the fruit is an oblong pod, in the form of the letter *f*, four or five inches in length, covered with brown bristly hairs, and containing four, five, or six seeds, of a brownish colour. The flowers appear in September and October.

The plant known by the name of Cow-itch, Couhage, and Cowhage, is referred by Bergius and Miller, to the *Dolichos urens* of Linnæus, and this error is also to be found in AITON'S Hortus Kewensis.

Though the pods of both *Dolichos urens*, and *Dolichos pruriens*, are beset with fetaceous hairs, but of the former, these are shorter and very thinly scattered over the pod, which is keel-shaped, much longer, and more than twice the breadth of that of the latter, and marked transversely with deep furrows.

These circumstances show, that the *D. urens* is
widely

widely different * from the officinal Cowhage here figured, which is a native of both Indies, and appears to have been cultivated in England, in the time of Ray, by Mr. Charles Hatton; and the plant is now growing in the Apothecaries' garden at Chelsea; but we cannot learn that it has ever been known to produce perfect flowers in our garden stoves†: so that for the very correct figure subjoined to this sheet, we are indebted to the liberality of Sir Joseph Banks, in whose herbarium we found an excellent specimen of the plant.

The sharp hairs of the pod readily penetrate the skin, and cause a very troublesome itching; a mis-

* The bad Cowhage, mentioned in page 68, was certainly not the *Dolichos urens*; it had none of its characters.

† I am seldom without a specimen of the plant in summer time, which grows very well in a window looking to the South; but I have never been able to cultivate it so as to produce flowers.—I have had it in Dr. Lettsom's hot-house at Grove-hill, and Dr. Pitcairns, at Islington; but it has never, even thus favourably placed, produced more than spikes of very young flowers, which never came to perfection. I possess a handsome drawing of a spike of the flowers, in full bloom, by S. Felsed, Organist, of Kingston—a good Botanist—but not equal in accuracy to Dr. Woodville's plate.

A good specimen of a spike of the ripe pods, covered with their setæ, may be seen in the Leverian Museum, presented by me to Mr. Parkinson.

chievous purpose to which, in this country, they have been long chiefly converted. But the violent irritation which these hairs produce upon the external skin, has not deterred practitioners from administering them internally, especially in the West Indies, where they have been generally employed for many years, as a safe and efficacious anthelmintic; and with a view to this effect, they are now admitted into the *Materia Medica* of the *Edinburgh Pharmacopœia*.

EDINBURG PHARMACOPŒIA.

DOLICHOS. [*Ed.*] *Pubes Leguminis rigida.*

Dolichos pruriens. *Lin.* Cowhage; the rigid down of the pod.

The *Dolichos* is a plant growing in great abundance in warm climates, particularly in the West India Islands; and there it is very troublesome to cattle, and other animals; for, on account of the spiculæ of the seed-bag, it excites, when touched, a very uneasy itching. These spiculæ have been
long

long used in South America, in cases of Worms, and have of late been frequently employed in Britain. The spiculæ of one pod mixed with syrup or molasses, and taken in the morning fasting, is a dose for an adult. The Worms are said to appear with the second or third dose; and by means of a purge, in some cases the stools are said to have consisted almost entirely of Worms; and in cases of Lumbrici, it is said to produce a safe and effectual cure. Those who have used it most, particularly Dr. Bancroft and Dr. Cochrane, affirm that they have never seen any inconvenience resulting from the internal use of it, notwithstanding the great uneasiness it occasions, on the slightest touch, to any part of the surface.

DR. COCHRANE.

[From the Medical Commentaries, Vol. II. Part I. No. IV. Page 82.]

THERE is a Medicine which is much used here* against Worms. Planters give it to the negroes with great success; and I have ordered it

* Dr. Cochrane, at the time of writing this, practised as a Surgeon in the Island of Nevis.

myself both to children, and adults, with very certain good effects. The plant is here called Cowhage, and is furnished with the *siliqua hirsuta* of Linnæus. The parts which are used are the hairy spiculæ, scraped from the pods, and mixed with syrup. They are supposed to act by promoting the peristaltic motion of the guts, and pricking the worms. The dose is not exactly limited; but the spiculæ obtained from a single pod, are esteemed a sufficient dose for a child of seven or eight years old.

This remedy is perfectly safe and innocent, although it occasions some uneasiness upon being first taken *. I have seen large clusters of worms come away from patients on the first dose. It is given at bed-time, and a purge in the morning. This practice is repeated after an interval of two days; and it is seldom necessary to give more than a second dose.

* Not if the syrup be thick enough. But if the vehicle be too thin, or in a state of fermentation, the setæ occasion a tickling in the fauces, and are separated from their vehicle by the action of the tongue, and spit out.

MR. JAMES KERR, *Patna, East Indies.*

[From the Medical Commentaries, Vol. II. Page 202.]

THIS plant (the *Dolichos pruriens*) is a native of the East Indies.

Nomen. By Europeans it is called Cowhage, or Cowitch. By many writers, a *Phaseolus*. By the natives of Bengal, Cadjust, from the itching and scratching it produces.

Classis. According to the system of the incomparable Linnæus, it stands in his seventeenth class, *DIADELPHIA*; and fourth order, *DECANDRIA*.

Genus. The flowers of this herbaceous plant differ very essentially from the *Phaseolus*. They have Linnæus's distinguishing mark of a *Lupinus*; but in other parts of the flower, and habit of the plant, the difference is very considerable. From the remarkable length of the alæ alone, I imagine it is sufficiently distinguished from every other

flower, and probably it deserves to constitute a new genus*.

Radix. The root is fibrous.

Truncus. The stem is herbaceous, equal, voluble, climbing, cylindrical, and naked; diverging into many branches, and rising to a great height, when properly supported.

* For which reason, it may not be improper to retain the name which I have adopted, being that which Dr. Browne, in his *Natural History of Jamaica*, has distinguished it by. He calls it *STIZOLOBIUM*, spicis multifloribus pendentibus alaribus, floribus ternatis, purpureis; and thus characterizes the parts of fructification.

PERIANTHIUM. Monophyllum, tubulato-campanulatum, subventricosè ringens; Labium superius, majus, obtusè emarginatum, reflectens; —Inferius, tridentatum, suberectum.

COROLLA Leguminosa. *Carina* bipetala, petalis oblongis, ad apices agglutinatis.

STAMINA. *Filamenta* decem, infernè connata, supernè, libera. *Antheræ* ovatae, alternè submonstrofae, oblonge tumentes.

PISTILLUM. *Germen* oblongum. *Stylus* subulatus, staminibus longior; *stigma* simplex.

PERICARPium. Legumen oblongum, sub-æquale; ad utrumque extremum adversè subarcuatum; hirtis pungentibus obsitum, seminibus quatuor vel quinque refertum reniformibus.

Folia.

Folia. The leaves are alternate, and trilobate, rising from the stem and branches about the distance of twelve inches from each other. The foot-stalk is cylindrical; from six to fourteen inches long. The lateral lobes are obliquely ovate, obtuse, entire, and nervous, with short petioles, and two very small stipulæ between the lobes. The middle lobe is smaller, ovate, ends pointed, with the petiole much longer, and two small subulated stipulæ.

Flores. From the axilla of the leaf, descends a pendulous solitary spike, from six to fourteen inches long, covered with long *blood-coloured**, papilionaceous flowers, rising by threes in a double alternate manner, from small, fleshy protuberances, each of which is a short pedunculus of three flowers. The partial foot-stalks are scarce half an inch long. The flowers upon the apex of the spike are first in bloom.

* In Jamaica the flowers are purple, but in every other respect except colour, exactly answer this description.

Calyx. The involucre to every three flowers of the spike, consists of three small, hairy, ciliated, deciduous leaves. The proper empalement is of one bilabiate leaf, with a bellied, gibbose, persisting tube. The upper lip, ovate, entire, and pressed a little backward by the vexillum. The under lip is trifold, acute, and more erect.

Corolla. a. **VEXILLUM.** The standard is ovate, concave, gently reclinate, and emarginate. It is about double the length of the empalement.

b. **ALÆ.** The wings are of an oblong, lanceolate shape, double the length of the standard, and both sides connivent, with short, furrowed, nectariferous tongues.

c. **CARINA.** The keel is falcate, acuminate, compressed, closely shut, very narrow, and scarce longer than the wings, with a curved, distinct apex.

Stamina. The filaments are diadelphous, nine united, and one separate; equal in length, and distinct

distinct above. The single filament, and four others, terminate in thick truncated points, having orbicular antheræ inserted into them by very short necks. Alternate with these are five other filaments, much more slender, and of a subulate shape, having oblong and larger antheræ. When the flower is in perfection, the filaments extricate themselves from the keel, by an elastic spring fly upwards, and press upon the standard.

Nectarium. There is a small tubular nectarium, with ten obtuse points, incircling the pedicle of the germen.

Pistillum. The (a) GERMEN is cylindrical, hairy, and almost the length of the empalement. The (b) STYLE is filiform, hairy, and as long as the filaments. The (c) STIGMA is globular and small.

Pericarpium. The fruit is a leguminous, coriaceous pod, four or five inches long, crooked as the letter *f*, and densely covered with sharp hairs, which penetrate the skin, and cause great itching.

Semina. The seeds are five or six in number, nearly of the shape and size of a small bean, with the hilum near the middle of the seed.

Locus et qualitas. It will grow in any soil; but it is generally eradicated from all cultivated grounds, on account of the hairs flying with the winds, and tormenting every animal they chance to touch. If it were not for this mischievous quality, the beautiful spikes of red flowers would deserve a place in the best gardens.

Tempus. It flowers in the cool months, from September to March*, according to the situation.

* This is to be understood of the *East* Indies, from whence the above account is transmitted. In Jamaica, it flowers at different times, in different places, but most commonly from October to November; and the best time for gathering the ripe pods is in the month of December.

DR. BANCROFT.

[From Bancroft's Essay on the Natural History of Guiana.]

DR. BANCROFT, after mentioning the frequency of disorders arising from Worms in that part of the world, and assigning some reasons for it, proceeds thus: "But from whatever cause these worms are produced, their number is so great, that the usual remedies are very insufficient for their destruction; for which reason the planters in general have recourse to the Cowitch, for that purpose. From whence its use was first suggested, I am uncertain; BUT ITS EFFICACY IS INDISPUTABLE*. The part used, is the setaceous, hairy substance, growing on the outside of the pod, which is scraped off, and mixed with common syrup, or molasses, to the consistence of a thin electuary, of which a tea-spoonful to a child of two or three years old, and double the quantity to

* As a proof that Dr. Bancroft's opinion has remained unaltered on this point, that gentleman has done me the honour, (an honour which I boast of with no small degree of pride,) to place under my care, about ten years ago, an elegant young lady, one of his own daughters, then at a lady's boarding-school not far from my neighbourhood; to whom I had the satisfaction of rendering essential service by means of the Cowhage.

an adult, is given in the morning fasting, and repeated the two succeeding mornings; after which, a dose of rhubarb is usually subjoined.

This is the empirical practice of planters, who usually, once in three or four months, exhibit the Cowitch in this manner to their slaves in general; but especially to all their children without distinction; and in this manner I have seen it given to hundreds, from one year old and upwards, with the most happy success*. The patients, after the second dose, usually discharged an incredible number of worms, even to the amount of more than twenty at a time; so that the stools consisted of little else than these animals. But though these were indisputable proofs of its efficacy, I was far from being convinced of its safety. I observed, that the substance given, consisted of spiculæ exquisitely fine, and so acutely pointed, that when

* It was my constant practice while in Jamaica, to have all the children of the estates and settlements, that I had the care of, from the youngest infant, to those of twelve years old, brought to me once in two months, to all of whom, without exception, I gave the Cowhage, for three mornings, whether they had symptoms of worms, or not.

applied to the skin, they excited an intolerable itching, and even inflammation, from whence I apprehended dangerous consequences, from their contact with the coats of the stomach and intestines. Indeed, when mixed into an electuary, in the manner in which they are given, their elasticity is so impaired, that they do not produce the same sensible irritation*; but yet I could conceive no other quality, on which their efficacy depended; especially after I had prepared both a tincture and decoction from the Cowitch, and given them to worm patients, without any sensible advantage. Influenced by these suggestions, I particularly examined the state and condition of all such patients as I knew had taken the Cowitch; and yet, can with the greatest truth declare, that, though prejudiced to its disadvantage, I was never able, either by my own observation, or a diligent enquiry, to discover a single instance of any ill consequence resulting from its use, which has been so exten-

* It cannot be from the elasticity being impaired: I have put dry Cowhage into my mouth, and after having turned it until sufficiently saturated with saliva, have swallowed it with as little difficulty as when mixed with treacle or any other viscid vehicle.

five, that several thousands must have taken it; and as no ill effects have been observed, I think, not only its efficacy, but SAFETY, are sufficiently EVINCED, *to entitle it to general use*; especially when we reflect on the uncertainty, and even danger, which attends other vermifuges. It is to be observed, that this remedy is particularly designed against the *long round worm*. Whether it is equally deleterious to the ascarides, or whether it has ever been used against them, I am uncertain*.

MR. NEIL STEWART, Surgeon, JAMAICA.

My good Friend,

In compliance with your request, that I would give you my sentiments, and recommendation of the Cowitch, in writing, I now sit down to give you a history of it; but must premise, that you can expect no more than I have already so often assured you of, *viva voce*.:—which is, that the Cowitch, as a vermifuge, has not its equal in the

* The experience of twenty years has given me innumerable proofs, that it is equally efficacious against every kind of intestinal Worm.

EDITOR.

world,

world, either for the certainty of its effects, or its perfect innocence. Too much cannot be said in the praise of that excellent medicine. I have, for my own part, given it for these ten years past, in all sorts of worm cases, both to old and to young; and with such good success, that I have never had occasion to look for any other anthelmintic. I have totally discarded the useless æthiops mineral: the uncertain crude mercury, and the still more uncertain, and less innocent preparations of it; such as calomel, corrosive sublimate, and so forth; and in short, all other medicines given with the same intention, except cabbage-tree-bark; and even *that* is not so great a favourite of mine, as it formerly used to be; not that I have any reason to find fault with it, but only because I find the Cowitch to answer every purpose I can want. I have given it even to tender and delicate white children, under one year old,—without any ill consequences. On the contrary, it has frequently brought away worms from them, even at so young an age. Every body, that gives it without advice, has a different way of preparing it; but the manner in which it is most commonly prepared, and the manner in which

which I myself order it, is to throw a dozen or two of ripe pods into a calabash, or common quart punch bowl, full of molasses, and stir all together until the hairs or spiculæ are taken clear off the pod, and well mixed in the molasses. The pods, being useless, are then thrown away.

Of this mixture, I order the hot-house man on every estate, to give all the little children, without distinction, a table-spoonful for three mornings running, once a month; and not only to the children, but if any of the grown negroes are suspected to have worms, it is likewise given to *them*, but in larger quantity: and it is inconceivable to one who has not known the good effects of Cow-itch, what wonderful success it has in expelling every species of worms; and I can safely aver, I never saw any ill consequences, or had any complaints, from those for whom I have prescribed it, or recommended it to. However, I would not think it adviseable to be given where there might be any disorder tending towards inflammation in any part of the alimentary canal, or where the natural mucus is defective.

I agree

I agree with you, in supposing, that the Cowitch acts only mechanically, in the same manner as cut hair would do, and from no intrinsic virtue; because a decoction of it is of no manner of use.

I must desire you particularly to take notice, that it is, and always has been my practice, to premise an emetic, where it can be done with propriety, previous to entering upon the Cowitch. I have often found the good effects of it, which induces me to continue it. A gentle dose of ipecacuanha, or tartar emetic, clears the stomach of matters which might impede the action of the Cowitch; and to children, a little oxymel of squills, will answer the purpose; but some of the Créoles, who seldom use an European medicine when they can find an apothecary's shop in the bushes, never use any emetic for themselves or their negroes, but the wild ipecacuanha, or red-head.

I have received the thanks of several ladies in and about Liguanea, and the mountains—and in the town of Kingston also—who have used the
Cowitch,

Cowitch, from my recommendation—both for their own children, and for their negroes. They are all lavish in praise of its virtues. In short, I think it may be looked on as a more certain specific in worm complaints than the Peruvian bark in the cure of intermittents.

I am, &c. &c.

Your's affectionately,

HOPE ESTATE, LIGUANEA,

August 9, 1782.

TO MR. CHAMBERLAINE.

NEIL STEWART.

WILLIAM WOODFALL, Esq.

SIR,

I HAVE derived much gratification from the perusal of your Treatise on the Cowhage. Your practice in the West Indies, and the experiments, which the frequency of worm complaints, peculiar to the negroes in that climate, naturally led you to make, give weight to your reasoning upon the subject, and establish your authority in respect to the efficacy of Cowhage in all diseases, the cause
of

of which may, from their symptoms, be concluded to be worms.

A case occurs in a family in my neighbourhood, the symptoms of which correspond minutely with many of those you describe in pages 4 and 5. viz. disagreeable breath, a particular heaviness (occasionally) about the eyes, itching of the nose, an appetite sometimes loathing all manner of food, at other times uncommonly voracious. The patient is unfortunately deranged, and I am at length brought to believe that worms are the cause of the malady. I had long been of opinion, that derangement of the mind, and almost every species of mania were, with some few exceptions, beyond the reach of medical relief. I conceived that to keep the bowels open just as much as ought to be the case of a person possessing the *mens sana in corpore sano*, was all that could be done; and that opinion I did not rashly take up from the impression of my own reading, but from having had it in conversation repeatedly confirmed by many physicians and medical men, some of whom had made maniacal cases the peculiar object of their study.

A medical

A medical friend, however, differed from his brethren upon the subject, and induced me at least so far to bend to his judgment, as to give way to his resort to medicine experimentally. He prevailed on a very worthy and skilful physician, to assist in the object of his pursuit. After a long, long trial, in which the effect of the greater part of the materia medica was put to the test, the latter gentleman prescribed doses of the *pareira brava*, which produced some copious discharges, and among the stools several *knots* of worms of the *Teres* species, all alive, above forty of which knots have been shewn to me, many more most probably escaped notice. Upon shewing them to Dr. Thornton, the gentleman who so kindly strengthened the efforts of my medical friend, after having seen some few knots* of them, he recommended your preparation of the Cowhage, and thence it is that I have sent for some; but as the patient will not readily swallow the electuary, we have been obliged

* Mr. Woodfall was so obliging as to send me, at different times, several of these knots for inspection. They were about the size of a cherry, or a small walnut, and consisted of very large ASCARIDES, *interwoven*

obliged to have recourse to the lozenges, which I fear are only secondary in effect to the electuary.

If it were not too great an intrusion on your time, I should be happy to learn from you, either by letter, or *vivâ vocé*, whether, since you commenced the exhibition of Cowhage, any case similar to this which I have attempted to described has fallen under your observation or practice. There is no resisting ocular demonstration, and it is clear, both from the symptoms and the result, that there are worms in the intestines of the patient, but I do

interwoven with a few small TERETES in each knot, from an inch, to an inch and a half in length. What is very remarkable, is, that after separating, with a couple of pointed probes, each worm from the mass, and dropping them, one by one, into a phial of cold water, in less than an hour, the knot regained its original form, and every worm seemed to be in precisely the same situation it held before the separation. This shews the beautiful order and regularity with which nature performs her operations, and also the tenacity of life in certain species of worms.

The patient above alluded to certainly received considerable relief, from the worm-symptoms, by a long continued use of the Lozenges; but the other malady was too deeply rooted to be removed by the same means. I have since learned, that, happily for the friends and relatives, the patient has some time back paid the debt of nature.

not find myself capable of tracing the cause to the effect; and therefore, though I well know that worms have an amazing influence on the whole system, I cannot satisfy myself that worms are the sole cause of the malady, which, by the bye, is of a peculiar sort, and partakes not of either of the ordinary species of malady. However, I am much inclined to be of opinion, that if you would turn your attention to cases of this kind, and direct your inquiries to an investigation of the question, "whether worms are not the cause, much more frequently than is generally suspected, of that delirium, or mental derangement, which is hereditary," possibly much more might be done for the relief of such cases than has hitherto been attempted, and, I should hope, much public benefit might result from your researches on this subject.

I am, Sir,

Your obliged humble servant,

Queen-Street, Westminster,

Nov. 8, 1796.

W. WOODFALL.

JAMES

JAMES JONES, Esq. *Fakenham.*

SIR,

I RECEIVED your valuable publication by the hands of Mr. —, and have perused it with the greatest satisfaction. I have been in the habit of using the *Stizolobium* ever since the year 1787, with constant success in worm complaints, particularly in cases of *tænia* and *teres*. My manner of exhibiting it was to take ʒj of any of the ordinary officinal confections, and roll it in the *spiculæ* until it had collected what I judged a sufficient quantity for a dose, according to the age and strength of the patient. It was then formed into a bolus. I direct one of these boluses to be taken in the morning, another an hour before dinner, and a third at bed time: next morning a cathartic, generally consisting of rhubarb and jalap, in proportion suited to the nature of the case;—and after a day or two of rest, the same course was repeated. I rarely have occasion to repeat this pro-

F

cess

cess more than thrice, and never found any inconvenience result from the spiculæ.

I am, Sir,

Your very humble servant,

Fakenham, Norfolk,

Aug. 11, 1793.

JAMES JONES.

DR. THORNTON,

[Late Physician to the Mary-le-bone Dispensary, and Lecturer on Medical Botany at Guy's Hospital.]

SIR,

I PERCEIVE by an advertisement, that you propose, in the course of next month, to give the world a new edition of your admirable work, on the *Stizolobium*, or Cowhage, the *Dolichos pruriens* of Linnæus. Educated as I have been to physic, and to the science of Botany, I could not fail to notice effects said, by so respectable an authority, to have arisen from the use of an exotic plant; and, not to particularize cases, I must beg leave publicly to declare, that the remedy you have introduced

introduced into this part of the world, bids, as far as
 my experience reaches, the most fair for success,
 of any, in all cases of worms. Conscious that the
 vitality of this tribe of beings may differ widely
 from our own, I have tried, among other reme-
 dies, even what others might not have ventured
 on, even had they supposed good could have
 arisen. In one case I even ventured upon arsenic
 to destroy the lumbrici: but the case was that of
 insanity. In another, to destroy the ascarides I
 injected dissolved ice into the rectum: but here
 the individual had a cancer with this other disease:
 and life was insupportable. But neither the in-
 tensity of cold, or the most powerful mineral poi-
 son, produced the cure. In both these cases, other
 applications failing, I afterwards tried your Stizo-
 lobium with advantage. Rough pewter filings have
 done much good, and are in truth a very rough
 remedy: but your Stizolobium acts also mechani-
 cally, yet not injuriously. The stomach and in-
 testines are sufficiently coated with mucus to be
 secure of their spiculæ: but the worms which
 may come into contact with these weapons of of-
 fence, are sure to become pierced thereby; and

thus wounded, are carried by the peristaltic motion throughout the intestinal tube, and ejected. There are certain juices offensive to different animals. Thus, the expressed juice of the *ranunculus*, (the common *butter-cup*,) sprinkled over the ground, will bring up all the worms in that spot; and the smell of *asafoetida* will drive away wild fowl; yet it is a doubt how far any hitherto discovered remedy acts as a destroyer of worms. The fern-root may be eaten in pounds, and therefore, as far as regards us, is inactive, and probably is such with respect to one species of worm, *the tania*; but the drastic purge afterwards employed, sometimes removed the enemy. Not so your *Stizolobium*;—mechanical action we all understand;—and were I sure that we had as yet arrived at the real poison of these reptiles, one not at all detrimental to ourselves, as parsley kills a parrot, and other such facts known to botanists, that I should rather recommend what succeeds *suâ virtute* than what destroys only by mechanical action. In this state of our science, however, I am happy to bear testimony in favour of your West Indian plant; whatever worms it comes into contact with, undefended

fended by the mucus of the bowels, or its folds, these it is sure to seize upon and destroy; and proves in consequence a very *safe* and *desirable* remedy, and one extremely worthy the attention of the faculty, and the public in general.

I remain, Sir,

With much respect and esteem,

Your faithful obedient servant,

ROBERT JOHN THORNTON.

No. 1, Hind-Street, Manchester-Square,

October 24th 1804.

DR. DE VALANGIN

HAS been for several years in the habit of strongly recommending the Cowhage as an anthelmintic, from the repeated evidence he has had of its good effects in obstinate worm cases; and never has known an instance of its proving

in the smallest degree, prejudicial to the weakest constitutions.

DR. SQUIRE.

I HAVE, in my own practice, seen many instances of the happy effects of your Cowhage, and have the satisfaction to report, that many more have been communicated to me by correspondents, to whom I have recommended it, as a safe and powerful anthelmintic.

The case of my nephew, as communicated to you by the Rev. P. BRODIE, of Winterslow, is a very striking one. That young gentleman was supposed to be subject to epileptic fits; the symptoms of that disorder, and of worms, being in many instances equivocal. I advised a trial of the Cowhage, which I procured from you several times, and sent to Salisbury. That trial was attended with the happiest effects. To the best of my recollection more than 150 large *teretes* were dislodged, and the patient recovered. I consider the Cowhage, as a vermifuge, a most valuable remedy,

medy, acting mechanically; by which operation it must be less prejudicial to the constitution, than the exhibition of drastic purges.

Ely-place, Holborn.

DR. UNDERWOOD.

—BUT one of the most powerful means, long in use with country practitioners, and of late strongly recommended by MR. CHAMBERLAINE, is the *Dolichos pruriens*, variously prepared; but the most simple form, that of giving it mixed up with treacle, is, perhaps, the best of all. It should be taken night and morning for three or four days, and then be purged off with senna tea, or jalap, and this course be repeated as occasion may require. UNDERWOOD *on the Diseases of Children*; Vol. I. p. 149. Edit. 1799.

DR. LETTSOM.

IN removing worms I generally attempt it by calomel purgatives; supervening tonics; in other words, to improve the constitution, and the worms then either move off, or die. However, some

cases have proved so rebellious as to have induced me to recommend the Cowhage, under thy direction, and I rarely recollect an instance, without having observed its salutary anthelmintic effects.

DR. JAMES SIMS.

I HAVE repeatedly prescribed the Stizolobium for patients troubled with worms, and have found it not only frequently efficacious, but always safe; which is more than can be said for Ching's Lozenges, or any of the quack remedies for this disorder now in use; as I have known them to produce the most disastrous, and sometimes even fatal consequences.

Finsbury Square,
October 14, 1804.

CHAP.

CHAP. VI.

CASES.

ALL the Cases which were in the first and second editions of this work, are left out of the present edition ; and none inserted but such as have occurred or been communicated since I came to reside in London. Indeed, were I to publish all that have been communicated within these twenty years, they would of themselves make a very large volume ; but as my object is, more to keep down the bulk of the book, than increase it in size, and of course, price, a few of the most striking Cases may be sufficient ; and I have preferred, where I could do it with propriety, rather to give those Cases which have been communicated on good authority, by other persons, than those which have come only under my own care.

CASE I.

JUNE 28, 1784. Monf. **RECORDON**, Watchmaker, No. —, Turnagain-lane, Snow-hill, had, for upwards of two years, been much distressed by an uneasiness and intolerable itching, accompanied frequently with a disagreeable tickling sensation along the course of the rectum, and about the anus. He had also a troublesome itching in his nose, which first gave him a suspicion of his having worms; this was confirmed by his observing great numbers of very small white worms, of the ascarides kind, that were discharged from time to time by stool. His complaints in general were of the class usually denominated **NERVOUS**; but he had with these, most of the symptoms that indicated worms; such as irregular appetite, cough, foetid breath, grinding of the teeth, gnawing pains in the bowels, &c.

In consequence of his having perused the pamphlet on Cowhage, on it's first appearance in the world, he applied to Mr. Murray (Bookseller) for my address, and called on me the next day.

On looking over several prescriptions which he had brought with him to shew me, I found he had taken some of the most powerful anthelmintics which either our own, or foreign Pharmacopœias could boast of, by the advice of several physicians, both in London and on the Continent.

I gave

I gave him four ounces of the electuary of Cowhage, prepared in the common way; of which I directed him to take a tea-spoonful every morning, and every third day half a drachm of rhubarb. In a few days he had a copious discharge of very small white worms, like ends of white thread, which continued to come away for some days. As he found so much benefit from the medicine, he requested I would permit him to continue it a few days longer; I therefore gave him four ounces more, to be taken as the first: this had no sensible effect; nor did the three or four last doses he took, bring away any worms. From every symptom of his complaint ceasing, it may be concluded therefore that there were no more left. As his stomach however was rather weak, I recommended him a course of stomachic bitters in a watery or vinous menstruum; and he shortly afterwards set out for Bath in perfect health, having made me a handsome present, as a compensation for the benefit he received from my advice and medicines*.

* This was the first case in which I had an opportunity of ascertaining to my own satisfaction, the efficacy of the Cowhage, against that species of worm whose seat is in the rectum; viz. the *ascarides*. Many hundreds of trials have since proved it most unequivocally.

CASE II.

DECEMBER 27, 1784. MRS. CUMMINGS, the wife of J. Cummings, Gardener, at Islington, aged 23, during the last six months of her second pregnancy, had very bad health; and though not remarkably big-bellied, was prepossessed with an idea that she had twins, from a sensation which she explained to be like that of two distinct bodies, each having a different motion from the other. My first acquaintance with this patient was not until about a week before she was brought to bed, when she came to engage me to attend her: she had a good natural labour; but after I had delivered her, she was very importunate that I would not leave her until I should *deliver the other child*: "she was sure there were two, for she felt the other move:" nor was she freed from her doubts, by my declaring, that, after the most careful examination, I could positively assure her there was *not* another child.

On my way home I endeavoured to account for this extraordinary sensation. Nothing was ever more clear to me than that there was not another child, and that all relating to the uterus was perfectly safe. From the softness and uniformity of the abdomen after delivery, I could not bring myself to entertain the most distant idea of its being an extra-uterine foetus. In short, I could not think of any moving body but a tape-worm that could in *this* instance be likely to exist. She was asleep when I made my next visit, which was in the evening. The following morning, she said she felt the
child

child (as she called it) very strong : but, on very particular enquiry, I was able to convince her, even from her own description, that these motions which she felt were not like the motions of a child.

I asked her, whether she had ever been subject to worms, and the nurse, whether she ground her teeth the last night during sleep ; to which the nurse answered, that she never heard any one make so disagreeable, or loud a “gritting” of the teeth in her life before ; the patient said she had been subject to worms when a child ; satisfied with this account, I told her I would soon ease her of her second child very safely—and sent her four ounces of the electuary of Cowhage : the third morning after taking it, she discharged a piece of tape-worm several yards in length, which the nurse kept for me, and which is now in my possession : she continued to discharge pieces of different lengths for a fortnight after ; and continued the Cowhage for another fortnight, after the fragments had ceased to come away.

The success of the Cowhage in this instance gave me peculiar pleasure on two accounts ; First, it was the FIRST case of TAPE-WORM, in which I had an opportunity of ascertaining its effects from ocular demonstration ; Secondly, a proof was afforded, of its safety, though administered in large quantity, even to women in the earliest stages of lying-in.

CASE III.

MARCH 31, 1785. ELIZ. DOGGETT, No. 2, Union-court, Holborn, aged 19, about the latter end of December, 1784, was seized with violent pains in the stomach, with attempts to vomit, and a sensation (to use her own words) as if some live thing wanted to come up. Her complaints were attended also with cough, loss of appetite, and a frequent spitting of black frothy saliva, faintings and cold sweats, costiveness, swelling and hardness of the belly, and universal lassitude; insomuch that she was obliged to quit her service. From that time her complaints increased, and new ones were added. Sometimes she had no appetite, sometimes would eat greedily. Her sleep was disturbed with startings and frightful dreams. Her pulse was always quick and feverish, her cough daily grew worse, a troublesome tenesmus, and frequent copious discharges of mucus, and also of a dark yellowish slime, like a heavy solid jelly, reduced her much.

When she lay on her left side, she could hear (as she expressed it) a noise like water pouring out of a bottle, and felt as if something was leaping within her. She described gnawing pains in different parts of the intestinal canal, sometimes so violent as to occasion her shrieking out, at other times she enjoyed ease for several hours.

This

This was the history of her case at the time she was recommended to me, for a trial of the Cowhage, by Dr. Willan *, of Bloomsbury-Square, who did me the honour to inform me, that having no doubt of its being a worm case, he had exhibited freely the pulv. stanni, and several very powerful vermifuges, but without any success, except that, after taking the first dose of calomel, she discharged a piece of a large worm; however she did not pass any more, although the calomel was continued until it slightly affected her mouth. I found her much emaciated; and unable to leave her bed on account of the very great pain she suffered whenever she sat up, or even attempted to move. Her pulse was regular, but inclined to be quick: the smell of her breath was not disagreeable: in other respects, her symptoms were nearly the same as those which have been described.

I gave her two ounces of the electuary of Cowhage, directing her to take a tea-spoonful of it at night and in the morning; and also to take a little rhubarb and jalap once in three or four days; the first dose she took at night, March 31st; after which I made the following report:—

APRIL 5th. The patient finds herself much better: the pains in her bowels are almost gone, except a slight

* I am happy in having this opportunity of acknowledging my obligations to Dr. Willan, who has recommended the Cowhage in a great variety of worm cases, with the most pleasing consequences.

twitching

twitching now and then ; sleeps comfortably, and is easier in every respect ; but has not passed any worms. Is able to sit up, out of bed.

11th. I found her able to remain out of bed, and walk about the house ; says that she finds herself so much better that she intends looking out for a place next week.

Her mother informs me that on the 7th she had a discharge by stool, of mucus, in which were enveloped innumerable white membranous bodies, which she described to be like narrow ribband, in bits from half an inch to three inches in length—and also, a large solid, knotted mass, that looked as if it was made up of the same materials as the small white bodies. After the girl had discharged this lump, or ball, as she called it, she found instantaneous ease from the *twitching* pain, which until that time had never entirely left her : and she had afterwards not the least return of it. Has not taken the purging powder, as the electuary keeps her body sufficiently open.

I had desired that if any worms were passed, in the stools, they might be taken out, washed in water, and kept in salt and water for my inspection : but the good woman not suspecting that these ribband like appearances could be worms, neglected to preserve them ; so that when I came to visit the patient on the 11th, I was disappointed of seeing what had really been discharged.

APRIL 18th. Is perfectly free from any complaint whatever : looks rosy and fat, and is gone to service.

CASE IV.

JUNE 29, 1785. ELIZABETH BIRCH, No. 2, Little Sutton-street, Goswell-street, aged three years. At the time I first saw this child, she appeared in the last stage of a deep consumption, and miserably emaciated. She had some time before that taken much bark, rhubarb, and other medicines, which the parents said had done her more harm than good ;—and finding that the child obtained no relief from any of the medicines which had been prescribed by an eminent, and justly respected physician, they had at length discontinued them, and waited patiently for the dissolution of their child. But happening to read my Treatise on Cowhage, which they met with by accident, they conceived that she had many of the symptoms therein mentioned as indicating worms, and applied to me the next day for my opinion and advice. On hearing the particulars of her complaint, I told the parents, very candidly, that I had very little hope of their daughter, that though it were true she had many, indeed *most*, of the symptoms attending worm complaints, such as foetid breath, difficulty of respiration, swelled belly, cough, itching at the nose, &c. yet that in her case these symptoms were very equivocal, and might all be symptoms of some other disease. That however her complaint might have originally proceeded from
worms,

worms, I feared in her present situation that she was too far gone to receive much benefit from *any* medicine. To say the truth, I spoke as I thought; and imagined her disease to be a *tabes mesenterica*, rather than a worm case. However, the parents were so sanguine in their hopes of the Cowhage, from the account they had read of it, that they earnestly intreated I would try it, if not absolutely improper. I assured them that though I had no great hopes of it's doing any good, they might rest satisfied that it would certainly do no harm. I gave them one ounce of the electuary prepared as usual, desiring them *not* to proceed exactly according to the printed directions given with the medicine, as on account of the extreme weakness of the child, I judged an emetic, even of the gentlest kind, would be more than she was able to bear. The electuary I desired them to give only in the morning; as a purgative, I gave her only Rhei. gr. v. jalap. gr. ii. m. f. pulv. diebus 4 vel. 5 repetend. si opus fuerit.

As soon as the patient had taken the first ounce, her mother came to me for a repetition of the like quantity; as she said she thought the child had received benefit from the first, "being, if any thing, rather better than worse; but that she had not discharged any worms."

I gave her two ounces more of the electuary; and I heard from that time no more of the child, therefore concluded she was dead; until about two or three months after, she accidentally came with her sister on
some

some errand to my house: she was at this time such a fine ruddy healthy looking child, that from mere curiosity I asked whose child she was;—and could hardly believe it, when I was told she was Elizabeth Birch, who was brought to me some months ago, so emaciated and diseased; but who was perfectly recovered merely by the use of Cowhage, which had at last brought away very slimy stools; in which, on close inspection, were found great numbers of white worms, which, from the description, must have been the real *ascarides*, with sharp heads and tails; some few alive; but mostly dead—besides these, there came away several small, and one very long worm of the *teres* kind, and some of the same kind in fragments. This patient is now married, and a very healthy woman.

CASE V.

MAY 7, 1787. I WAS favoured with a line from Dr. Hamilton, of Old Broad-street, Physician to the London Hospital and Surry Dispensary, requesting that I would supply with the preparation of Cowhage, Mrs. G——, of twenty-five years of age, who had symptoms of a tape-worm. She had by his prescription taken small doses of calomel for some time, and purges of jalap, which last produced such uneasiness in her bowels as made Dr. Hamilton wish to try whether the Cowhage might not prove more efficacious, and less irritating: this proved completely to be the case; for, not long after, she informed Dr. Hamilton that she had
not

not continued the use of the medicine many days, when she passed several portions of a tape worm, and lastly, the remainder, all at once, which she represented to have been sufficient to fill a half-pint mug.

CASE VI.

Copy of a letter from MR. PHILIP WERNER, late Surgeon of his Majesty's ship Brilliant, and now Surgeon to the British factory at Algiers.

" TO MR. CHAMBERLAINE.

" Algiers, September 3d, 1789.

" DEAR SIR,

" It was late in August, 1788, when I returned to
 " Algiers with your truly valuable present of the
 " Cowhage, which you favoured me with before my
 " departure from London. Opportunities for trying
 " the excellence of this medicine offered themselves
 " soon, as worm complaints are very frequent in this
 " part of the world, principally owing to the half-
 " baked bread and other stiff, heavy, unfermented in-
 " digestible farinacea, under the names of *cuscusu*, *pikau*,
 " &c. which constitute the greatest part of the diet
 " of the Moors, together with great quantities of prick-
 " ly pears, water melons, cucumbers, unripe apples,
 " pears, and a variety of other fruits.

" Soon after my arrival, I was sent for to see *Mimon*
 " *Ben Bron*, who, in the superstitious language of the
 " place

" place, was said to be possessed by the devil. He was
 " about 25 years of age; much emaciated, of a pale
 " earth-coloured countenance, a big tense belly, fore
 " when touched. Pulse quick, irregular, contracted.
 " Grinds his teeth much, and starts frequently in his
 " sleep; which is seldom quiet or refreshing; appe-
 " tite irregular, sometimes voracious; and at other
 " times having a total disgust to solids: but always
 " thirsty. Stools irregular, being sometimes costive;
 " at other times having a diarrhœa; with constant te-
 " nismus in either case.

" I found him in a violent paroxysm attended with
 " a constant and ineffectual retching.—By means of
 " some assistance I with great difficulty, obtained an
 " opportunity of looking into the patient's mouth,
 " when I perceived the head of a lumbricus winding
 " and twisting himself about. I laid hold of it with
 " a pair of forceps, guarded with a bit of rag to pre-
 " vent the worm from slipping from me, and pulled it
 " out whole. The fit went off soon after: I was told,
 " on enquiry, that the patient had been subject to
 " these paroxysms at irregular times for upwards of
 " twelve months.

" As he had been costive for three days, I ordered
 " that he should take a common purging mixture, and
 " an opiate at night.

" On the following morning I directed him to take
 " a table-spoonful of the Cowhage mixture, or élec-
 " tuary, prepared in the manner you have directed it;
 " and

" and as no effects were produced, nor any stools on
 " that day, another table-spoonful was taken at bed-
 " time. The patient had passed the day, and fore-
 " part of the night very quiet, but towards morning
 " was tormented very much with pinchings and ex-
 " cruciating pains in different parts of the abdomen,
 " from which he was relieved by a copious stool, with
 " a great many worms of the lumbricus kind. I or-
 " dered the Cowhage to be continued in the quantity
 " of a table-spoonful every morning as long as any
 " worms were perceived coming away; interposing
 " every fourth day a dose of jalap with calomel. From
 " that time he had not any more fits, and was mend-
 " ing in health and strength daily.

" Seeing the good effects of that medicine upon
 " himself, he asked my advice whether he might give
 " some of the same to his children, who were also
 " great sufferers from worms, and laboured under the
 " usual complaints of tumid abdomen, pale face, ir-
 " regular appetite, &c. &c. I accordingly gave him
 " a pot of the electuary for his children, to be taken
 " as usual, and they passed a great many worms after
 " it; and by perseverance in it for a very few days,
 " all their bad symptoms went off; the father ex-
 " pressed himself quite enchanted at the excellence of
 " that miraculous medicine as he called it.

" Since that time I have given the Cowhage in a
 " variety of worm cases, and can honestly assure you,
 " never met one instance of its failure where worms
 " really existed."

CASE

CASE VII.

*Extract of another letter from MR. WERNER, Surgeon at
Algiers, to MR. CHAMBERLAINE.*

Algiers, November 7th, 1789.

“ * * * MR. WOLLIN, navy surgeon, when I was
“ last in London, was mentioning to me the case of
“ Mr. F—, of Bedford-row, aged 28, who, after every
“ worm remedy in his knowledge had been tried in
“ vain during the space of three years, was rapidly
“ hastening to the grave. I mentioned to him the
“ Cowhage, and at his request, gave him a direction
“ to your house: He afterwards informed me by let-
“ ter, that before his patient had taken a four ounce
“ pot of the electuary, prepared by you, he voided, at
“ different times, pieces of a tape-worm from five to
“ seven yards in length; and in a very short time re-
“ covered his health completely.

“ Mr. Wollin, in the same letter, mentions his
“ having given the Cowhage to Mr. ———, of St.
“ James’s-market, aged 30, who had suffered in a fe-
“ vere manner for a long time, and had had the ad-
“ vice of several of the most eminent physicians in
“ and about London, and had persevered with uncom-
“ mon diligence in the medicines prescribed for him
“ by each, but without any benefit whatsoever. Mr.
“ Wollin gave him a four-ounce pot of your prepara-
“ tion,

“ tion, which brought away several short pieces of a
 “ tape-worm, which Mr. Wollin saw. His patient
 “ told him that one morning he had passed a longer
 “ piece of about 15 yards, which the maid had
 “ inadvertently thrown away *.”

CASE VIII.

Communicated in a letter from MRS. ALICIA SHEPHERD,
No. 1, Mount Lodge, Broadstone, Dublin.

“ **TO MR. CHAMBERLAINE.**”

July 12, 1791.

“ * * * * I HAD, in the course of a year and a half,
 “ often met with a Mr. Faulkner, whose wife I repeat-
 “ edly heard was in a bad state of health; at length,
 “ there were no hopes of her life. In February last I
 “ was surprised by a visit from Mr. Faulkner, who, after
 “ apologizing for his intrusion, told me the purport of
 “ his visit was, that having read your treatise on Cow-
 “ hage, and being very desirous of trying it with his wife,
 “ he had taken the liberty of waiting on me, in hopes
 “ of hearing where it might be had; he supposing,
 “ from my being acquainted with the author, it was
 “ possible I might be able to inform him: that before
 “ he ventured to trouble me, he had sought it in every

* Mr. Wollin was so obliging as to call on me some time ago, and con-
 firmed the particulars mentioned in Mr. Werner's letter. W. C.

“ druggist’s and apothecary’s shop in Dublin, but
 “ in vain—I had a little by me: I told him I
 “ would divide with him the small remainder I had
 “ left; we mixed the Cowhage in some honey, and
 “ he went away quite happy. I heard no more of
 “ Mrs. Faulkner for a long time, and concluded she
 “ was dead, as she had been in a deep consumption
 “ for a year and a half. I imagined too, sometimes,
 “ that the Cowhage might have been improper, and
 “ accelerated her death; so feared to ask—but this
 “ surmise I kept to myself.

“ One evening the latter end of April, Mr. Faulk-
 “ ner entered, leading in a beautiful young lady, and
 “ addressed me thus: ‘ Madam, I have brought this
 “ ‘ lady to return you her thanks for restoring her
 “ ‘ to good health.’—‘ Indeed, (rejoined the lady)
 “ ‘ I am under the highest obligations to you; for I
 “ ‘ have been for near two years in the most deplorable
 “ ‘ state; but I am now in the most perfect health, for
 “ ‘ which I am indebted solely to the Cowhage.’” In
 “ the course of conversation she told me she had taken
 “ it but three times when she began to mend faster
 “ than she thought it possible—she passed numerous
 “ worms and great abundance of the skins of others:
 “ I saw her yesterday, she still continues in good
 “ health. She told me at our last interview, that she
 “ gave a little of the Cowhage to a poor woman’s
 “ child that was reduced to a skeleton, and confined
 “ to its bed; that the boy got well almost immediately,
 “ and is now in good health, and playing about the
 “ street.”

CASE IX.

*Communicated by MR. JAMES CREW, at MR. SIMONS'S,
Carlisle-street, Soho-square.*

“ A YOUNG man, aged about 19, applied to me
 “ about two years ago for some medicine, as a
 “ palliative (a cure, he said, he did not expect)
 “ for a very disagreeable complaint, which he was
 “ constantly troubled with. He complained at times,
 “ of a very disagreeable sensation, as if some extra-
 “ neous body was moving about in his throat; at
 “ others of a slight titillation, as if tickled by a fea-
 “ ther, with a constant and almost incessant hacking
 “ cough, which had troubled him near nine years,
 “ which symptoms were always increased by exercise;
 “ so that at the time he made application, he said he
 “ was obliged when walking, especially if fast, or if
 “ running, to stop every 20 or 30 yards to remove
 “ something in his throat by several times hacking or
 “ attempting to cough, when he would find himself
 “ for a little time easy. He told me he had been sub-
 “ ject to worms from his infancy, and had taken all
 “ the noted worm-cakes, &c. of any repute, with lit-
 “ tle relief; his appetite was always good, body regu-
 “ lar, and, in other respects, in very good health. Not
 “ doubting but his complaints proceeded from worms,
 “ I gave him a four ounce pot of the Cowhage electu-
 “ ary, which he took very regularly; but not finding
 “ much relief, I gave him a second, and also a third.

“ At

“ At the expiration of three or four days, after taking
 “ the third pot, he found his complaints, he said,
 “ almost suddenly leave him, and could then jump and
 “ run about with pleasure, without the fear of being
 “ attacked with any of his usual symptoms. I recom-
 “ mended him a cathartic after taking his last dose,
 “ but he seeming rather to decline, I did not urge it,
 “ as he was free from all his complaints, and, and at
 “ that time perfectly well.”

CASE X.

*Copy of a letter from the Rev. P. B. BRODIE, Rector of
 Winterslow, near Salisbury.*

“ TO MR. CHAMBERLAINE.

“ SIR,

“ A YOUNG gentleman in the county of Wilts, at
 “ the age of 10 years, had manifest and violent symp-
 “ toms of worms. We tried several remedies, but had
 “ the misfortune to see his body debilitated, his sight
 “ very much injured, and the vital functions in gene-
 “ ral much impaired. His case was communicated
 “ to Dr. Squire*, who prescribed, and was kind enough
 “ to

* I take this opportunity of acknowledging the many obligations I
 owe to Dr. SQUIRE of Ely-place, as well for his much-valued friend-
 ship, manifested on all occasions, as for his good offices, by means of
 G 2 which

“ to take the trouble of sending to us your medicine ;
 “ we administered it according to your directions, with
 “ a previous emetic.

“ After some days, he evacuated one worm about
 “ three inches long ; and after repeated doses, five
 “ more ; but besides the emetic, we had given him
 “ some phyfic. After this, we paused a while, and
 “ soon after the re-commencement of our operations,
 “ he produced in one day no less than *sixty* worms
 “ (*teretes*,) of different lengths, from three to *sixteen*
 “ or *eighteen* inches, all alive, and without any slime.
 “ We continued our mode of proceeding, but by some
 “ circumstances we were led to imagine that the ac-
 “ tion of *digging* assisted our endeavours ; we gave the
 “ experiment a fair trial, and found that we were
 “ more successful when he used that exercise, than
 “ when he omitted it. Upon the whole, in the course
 “ of taking three or four pots of your medicine he
 “ evacuated *one hundred and sixty-five* worms, between
 “ the sizes above mentioned, but most of them *above*
 “ the average size, and those all alive, and the greater
 “ part of them with the spiculæ of the Cowhage stick-
 “ ing in them ; besides a great many dead ones.

which I have been favoured with the particulars of the case here relat-
 ed : this gentleman has contributed greatly to raise the reputation of the
 Cowhage, by his recommendations of it in several instances, where the
 success attending its exhibition, has, in almost every one, afforded the
 highest satisfaction both to the prescriber and the patients.

“ We

“We flattered ourselves he was quite relieved :
 “but found it requisite within the year to have re-
 “course to you again ; he evacuated twenty worms,
 “and has been perfectly well ever since. This is, as
 “far as I recollect, an exact and true account, and if
 “it can serve the public or you to insert it in the next
 “edition of your book, you are welcome to it for that
 “purpose, and to the name also of

“Your most humble servant,

“P. B. BRODIE,

“*Rector of Winterflow, near Salisbury.*”

July 23, 1792.

The young gentleman whose case has been commu-
 nicated in the foregoing letter, did me the honour some-
 time after, to call at my house, and give me a more par-
 ticular account of the symptoms. He was first attacked
 he said, with a weakness in the eyes, and a spasmodic
 affection, similar to *chorea viti*, in the right arm; which
 was also much swelled. To these succeeded epileptic
 paroxysms, attacking irregularly, and increasing, in
 violence and frequency, for upwards of a year and a
 half. In these fits, of whose approach he had no
 warning, he would suddenly fall down, and continue,
 bereft of sense, in strong convulsions, for upwards of
 an hour. The belly was sometimes contracted or drawn
 towards the spine : at other times much swelled, with

great tension;—irregular indurations or lumps appeared on the surface of the abdomen, and a most excruciating pain in the stomach, accompanied the other symptoms, throughout the whole of this tedious disorder.

In page 23 of this work, it is noticed, that among the many derangements which take place in the human frame, from a superabundance of worms, affections of the eyes are not unfrequent. Very obstinate *ophthalmias* often arise from this cause alone. To those justly eminent and respectable surgeons, Mr. Wathen, Mr. Ware, and Mr. Wathen Phipps, I am indebted for much information on that subject.

CASES XI, XII.

The success which attended the exhibition of Cowhage, in the case of Miss P.—— of Cambridgeshire, a patient of Mr. Wathen, (stated in the note at the foot of page 23,) induced that gentleman to recommend it very strongly to be tried in the following case, occurring not long after.

MISS H. daughter of J. H. Esq. *Spring Gardens*, was under Mr. Wathen's care on account of an ophthalmia of long continuance. In a very short time after the
 young

young lady had began a course of the medicine, I had the pleasure of receiving a line from Mrs. H. the young lady's mother, informing me that "her daughter's eyes were much better, and that the Cowhage had brought away a great number of *ascarides*, all alive."

CASE XIII.

JULY, 1794. HANNAH BESTON, Pool's Buildings, Gray's-Inn-Lane, aged 35, had been from the violence of several bad symptoms caused by *ascarides*, and also *tænia cucurbitina*, (the presence of both which were ascertained by her discharging at different times several of the former, alive, and portions of the latter) reduced to so debilitated a state, as rendered her at last totally incapable of following her occupation; (that of a laundress.) She had applied at various times to three different medical gentlemen, and afterwards to a dispensary, where every powerful anthelmintic had for a long time been tried, under the direction of a very judicious and humane physician, without producing any good effect, or the least diminution of her torments. Disappointed of finding the wished for relief, she determined to seek it elsewhere, and applied soon afterwards to my friend Dr. Willan, of Bloomsbury Square, who, on hearing the particulars of her case, gave her a direction to my house, with a line, requesting I would try the Cowhage with her.

She persevered in taking it for near a fortnight, before any material alteration was perceived; I desired

her to take double her usual quantity. Ten days afterwards she called to inform me that she had passed a most incredible number of both sorts; and one day in particular they came away so fast almost every quarter of an hour, without stools, as to oblige her to desist from any sort of business whatever and prevented her from even walking out of her apartment.

AUGUST 6th. She came to my house with expressions of joy and gratitude, in order to shew me a tapeworm which she had discharged that morning; it measured four yards, and was alive. She said it was but a very small part of what she had passed that morning; that the rest came away mostly in a lump, and had she brought the whole, she said she supposed it would nearly fill a half pint mug; and that her reason for bringing no more was, because she thought a small piece of it would be sufficient for me to look at.

From that time all her symptoms abated, and after a few gentle purges her complaints entirely left her.

I have frequently seen her since; she retains good health, and follows her usual occupation without interruption from any kind of illness.

CASE XIV.

JOHN SHIELDS, a sailor, aged 24, was recommended to me by Dr. Thornton, in August 1796, on account of the distressed situation he was in, from
tape

tape-worms, with which he said he had been grievously afflicted for upwards of six or seven years. He first found he had the tape-worm, when on his passage from Malaga to Gibraltar; and attributes their great increase to his making too free with grapes and other fruits, and drinking much muddy wine and bad water, in different parts of the Mediterranean. The symptoms he laboured under when I first saw him were, a most violent and unceasing gnawing in the abdomen, which when the patient was very hungry, became insupportable. He was emaciated to the greatest degree; constantly troubled with disagreeable dreams; abdomen, always hard and tense; a sensation, like a heavy weight, in the left hypochondrium; itching of the nose and anus intolerable; flatulence, cold sweats, pulse never less than 120, oftener 130 to 144; frequent faintings; muscles of the trachea and face frequently convulsed; sickness always on rising; obstinate ophthalmia, and eye-sight much impaired. It would appear as if this poor fellow had not room for the immense progeny of tape-worm he carried, for every day, portions crept *ex ano*, in length from two to nine inches, and longer, insomuch that although he could scoop them up by spoonfuls, as he said, in his habiliments, he found no remission of his symptoms. He said he had been in Haslar, and St. George's Hospitals, and discharged as incurable, from both.

I began with an emetic; but he was so wretchedly debilitated, I feared to give him more than pulv. ipecac. gr. x. which answered very well. I then gave him the Cowhage in double quantity, which he very diligently
came

came for, for about three weeks, after which I saw no more of him; but Dr. Thornton, of whom I enquired concerning him some time afterwards, assured me that the man was quite recovered in a very short space of time, and that he had very lately seen him fat, strong, and in perfect health.

CASE XV.

Communicated by MR. GROOTE, Apothecary to her Royal Highness the Duchess of York.

“ DEAR SIR,

“ I ENJOY much pleasure and satisfaction in informing you of the success I have met with in the application of your Cowhage electuary; it has in general answered with me in all worm cases: I never experienced the smallest inconveniency in administering it; one case I beg particularly to notice. I was desired to attend a young lady in September 1801, in Dean's Yard, Westminster; she was near 14 years of age, her parents told me that she was in a deep consumption; that all advice and application had been unsuccessful. I found her in a very emaciated state; she had the appearance of being very far advanced in an atrophy; her face pale and almost cadaverous, the abdomen much distended, she had not much fever, hardly any cough, her appetite unequal and capricious. From these and other symptoms I judged this to be a complete worm case, and mentioned

" tioned it as such to her mother. She said that several
 " medical gentlemen who had seen her, thought the
 " same, and had prescribed and directed medicines for
 " that purpose without effect; I pressed her much to
 " try the Cowhage electuary. I ordered her a gentle
 " cathartic, and the next day she began the electuary.
 " The quantity of both the round worm, (lumbricus
 " teres) and ascarides, she discharged is past belief.
 " She continued the electuary, and in less than twelve
 " days her appearance was very different. She slept
 " quiet, the abdomen resumed its proper size, she be-
 " gan to recruit in flesh and complexion, in ten days
 " more she was quite recovered. It is now five years
 " since, and she has the appearance of a healthy young
 " woman. More cases I have had, and two in particu-
 " lar in Hertfordshire, in all which, the Stizolobium
 " you supplied me with has given complete satisfac-
 " tion, both to myself and my patients.

" I am, dear Sir,

" Most truly yours,

" G. W. GROOTE."

Dean Street, Soho,
 25th Nov. 1802.

CASE XVI.

From MR. CHARLES COLLIER, *Student of Medicine at St. Bartholomew's Hospital.*

"SIR,
 "ALTHOUGH I had daily opportunities during the
 "period of my residence with you, of witnessing the
 "many extraordinary cures performed in worm-cases,
 "by the exhibition of Stizolobium, many of which,
 "being well worth recording, I noted down; yet the
 "following, from the extraordinary recovery of a pa-
 "tient whom I thought nothing could recover, I
 "thought it my duty more particularly to communi-
 "cate to you.

"MRS. DORE, of No. 14, St. James's Walk, Clerk-
 "enwell, brought to your house one day in the begin-
 "ning of last September, her son 13 months old, for
 "some medicine to compose him in the night. He
 "was emaciated to the last degree, and I thought with
 "the mother, that little was to be done, more than
 "endeavouring to render the short remainder of life
 "less irksome to our little patient, and those that
 "were about him. At her next visit I enquired more
 "particularly about the child's case; from circum-
 "stances, such as foetid breath, abdomen tumid and
 "hard; debility, and other symptoms, I was inclined
 "to indulge a hope that it was a worm case. He would
 "lie frequently for an hour at a time as if animation
 "were.

“ were fled, and the next moment were to close his
 “ existence.—When not in this situation, he had a
 “ high and constant fever; although at nine months
 “ he could walk very well, he was now so debilitated
 “ he could not stand; his eyes were dull; a difficulty
 “ of breathing was aggravated by a harassing cough;
 “ restless at nights and uneasy in the day time, except
 “ when opiates gave him temporary relief. Worn out
 “ at one time by a diarrhœa; and obliged to apply to
 “ opening medicines another time, to obviate costiveness.
 “ I set out to conquer these complicated maladies in so young a patient; in the first instance I
 “ gave him an opening powder with gr. iſs. of colomel
 “ and gr. ſs. Hydrarg. Sulph. rub. to clear the intestines of slime always attendant upon worms. I then
 “ began without loss of time upon the Cowhage, but
 “ as the mother found it impossible to make him take
 “ the electuary—and, giving it up for a lost cause did
 “ did not wish to *teaze him*, I prevailed on her to use
 “ her patience and industry to get him to take the
 “ tablets or lozenges—which, he not supposing it a
 “ medicine, she found no difficulty in accomplishing.

“ I directed half a dozen of the tablets to be given
 “ morning and evening. For the first two days no
 “ effect was produced, but I was determined to persevere in my attempts to rescue an infant from the
 “ grave, especially as in such long standing complaints
 “ as this, there must be time allowed for medicines
 “ to bring about an alteration. The doses were repeated: now began to appear the effects of the
 “ Cowhage; which, I must confess, notwithstanding
 “ ing

“ ing the high opinion I had formed of it, exceeded
 “ my belief. Worms innumerable, of the ascarides
 “ species, but very large, were discharged. His cough
 “ and fever now began to abate by degrees; his eyes
 “ to resume their usual vivacity; and, now rendered
 “ more free from pain, by the diminution of this
 “ dreadful malady, he began to grow more cheerful.
 “ Worms still continued to come away, particularly on
 “ those days on which I exhibited a purging powder;
 “ which was every fourth day. Opiates, but in smaller
 “ quantity, were still necessary to rest him through the
 “ night. The Cowhage lozenges still brought away
 “ worms, until at length a large quantity of mucus
 “ was discharged. The tablets were continued for
 “ some time longer, but no appearance of any worms
 “ afterwards. Since that time, opiates were gradually
 “ left off, and the infant rapidly recovered, and is
 “ now alive and well. I am very happy thus to have
 “ had it in my power to restore an infant to his pa-
 “ rents, and to record to you a case in which the Cow-
 “ hage has afforded almost *miraculous* benefit, far exceed-
 “ ing the expectations of his friends, or even myself.

“ I am, Sir, &c. &c,

“ CHARLES COLLIER.”

No. 30, Cary-street, Lincoln's in-fields.

July 9, 18c4.

F I N I S.





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